Substance Abuse Trends in Maine

Epidemiological Profile 2013

Western District

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Introduction

Overview of Western Public Health District

Western Public Health District (PHD) has a population of 195,720 people, representing 15 percent of Maine's total population in 2012. This is split between Androscoggin County (107,609), Franklin County (30,630) and Oxford County (57,481), the three counties that make up the district. In terms of population density, the district has 46 people per square mile. The State of Maine is considered an "aging" state, with 16 percent of the population being 65 years old and over, a higher rate than the overall US population (13%). In Western PHD, approximately 16 percent of the population was 65 years old or older in 2012. Approximately 95 percent of Western PHD's population is Caucasian, followed by African American (2.3%), Asian (0.7%), and American Indian or Alaska Native (0.4%). At 3.8 percent, Androscoggin County has the highest proportion of African Americans of any county in the state. The median household income in 2012 differed little within the district, ranging from $40,889 in Oxford to $45,699 in Androscoggin. In Western PHD 14.4 percent of the population was living below the poverty level. In sum, compared to the rest of the state, parts of Western PHD are more diverse while others are more rural.

It is within the context of these demographic characteristics that substance abuse in Western Public Health District must be examined.

Purpose of this Report

This report takes into account the primary objectives of the Office of Substance Abuse and Mental Health Services (SAMHS): to identify substance abuse patterns in defined geographical areas, establish substance abuse trends, detect emerging substances, and provide information for policy development and program planning. It also highlights all the prevention priorities identified in the SAMHS strategic plan: underage drinking, high-risk drinking, misuse of prescription drugs, and marijuana use. Finally, the report monitors many of the factors that contribute to substance use, such as access and perceptions of harm, as well as the common negative consequences such as crime, car crashes and overdose deaths.

This report includes data available through May 2013. Older and unchanged data are included when more recent data were not available. Five major types of indicators are included: self-reported substance consumption, consequences of substance use, factors contributing to substance use, indicators about mental health and substance abuse, and treatment admissions. The most recent data available for the Behavioral Risk Factor Surveillance System (BRFSS) are from 2011. **Due to methodological changes in weighting and sampling, 2011 BRFSS data cannot be trended with previous BRFSS years.** For this reason, we have only included snapshots of 2011 BRFSS data for this year's SEOW report. Previous county-level reports with older trending data are available at the http://www.maine.gov/dhhs/samhs/ website.

Consumption of Substances

Consuming harmful substances can have detrimental effects on an individual's well-being, including increased risks of morbidity, addiction and mortality, and has a harmful effect on society as a whole including increased motor vehicle accidents and crime. However, it is the manner and frequency with which people drink, smoke and use drugs that are often linked to particular substance-related consequences. To understand fully the magnitude of substance use consequences, it is important to first understand the prevalence of substance use consumption, itself. Consumption includes overall use of substances, acute or heavy consumption and consumption by high risk groups (e.g., youth, college students, pregnant women).

As demonstrated by the indicators below, alcohol remains the substance most often used by Western PHD residents across the lifespan. In particular, binge drinking among 18-35 year olds in Western PHD is a concern, although it appears that youth and adults in Western PHD have slightly lower rates of drinking overall compared to the rest of the state. Tobacco use among the Western PHD adult population, particularly smoking cigarettes, appears to be similar as that found in the rest of the state. Marijuana is one of the two most commonly used drugs in Maine and Western PHD is no different in that respect.

Alcohol

Indicator Description: ALCOHOL USE AMONG YOUTH. This measure shows the percentage of Maine high school students who reported having had one or more alcoholic drinks within 30 days prior to the survey.

Why Indicator is Important: Alcohol is the most often used substance among youth in Maine. In addition to the risks alcohol consumption carries for adults, developing adolescent brains are especially susceptible to the health risks of alcohol consumption. Adolescents who consume alcohol are more likely to have poor grades and be at risk for experiencing social problems, depression, suicidal thoughts, assault, and violence.

Data Source(s): MIYHS, 2009-2011.

Summary: Twenty-seven percent of high school students in Western PHD who reported having consumed one or more alcoholic beverages in the past 30 days in 2011. This is slightly lower than the statewide average (28%).

Figure 1. Percent of high school students in Western PHD who had at least one drink of alcohol during past 30 days: 2009, 2011
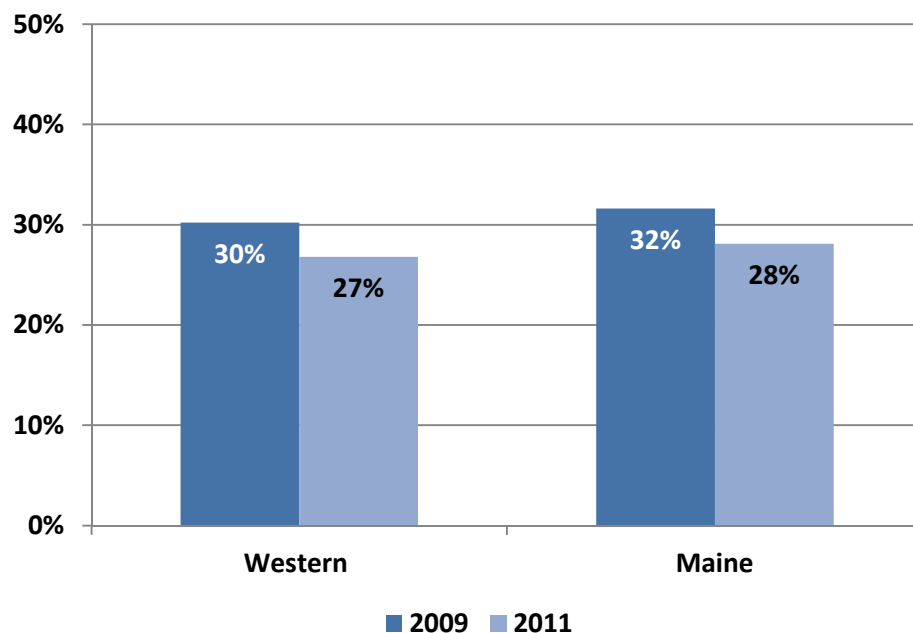
Source: MIYHS

Indicator Description: HIGH-RISK ALCOHOL USE AMONG YOUTH. This indicator presents the percentage of Maine high school students who reported having had five or more alcoholic drinks in a row in one sitting at least once during the 30 days prior to the survey.

Why Indicator is Important: Youth are more likely than adults to engage in high-risk drinking when they consume alcohol. High risk alcohol use contributes to violence and motor vehicle crashes and can result in negative health consequences for the consumer, including injuries and chronic liver disease. Youth who engage in high-risk drinking also are more likely to use drugs and engage in risky and antisocial behavior.

Data Source(s): MIYHS, 2009-2011.

Summary: In 2011 16 percent of high school students in Western PHD reported having consumed five or more alcoholic beverages in one sitting during the past 30 days. This is slightly lower than the statewide average (17%).

Figure 2. Percent of high school students in Western PHD who had at least five drinks in a row during past 30 days: 2009, 2011
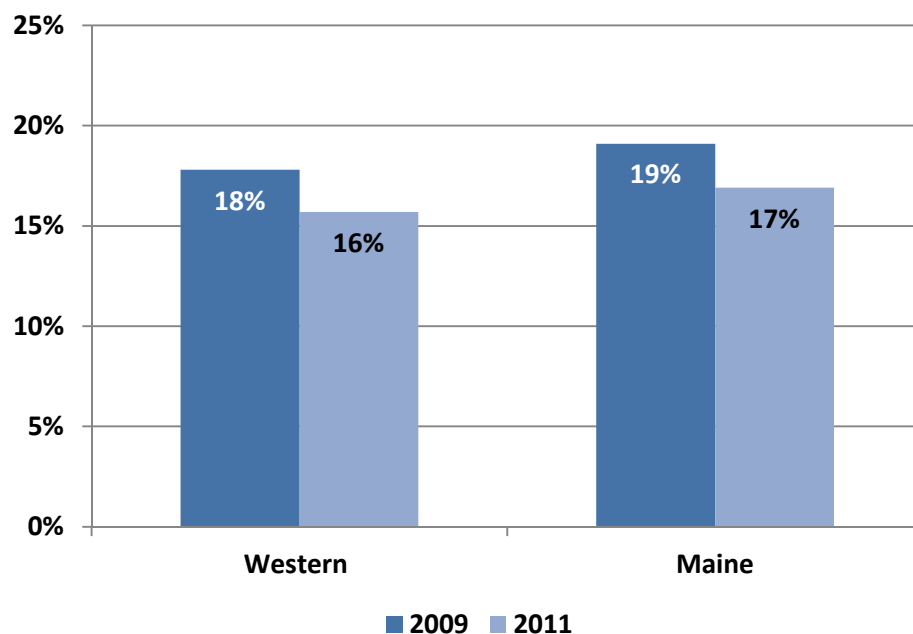
Source: MIYHS

Indicator Description: ALCOHOL USE AMONG ADULTS. This indicator portrays the percentage of adults who reported having consumed one or more alcoholic drinks on one or more days within the past 30 days.

Why Indicator is Important: Alcohol is the most often used substance in Maine adults. Excessive and high risk alcohol use may contribute to violence and result in many negative health consequences for the consumer. Moderate drinking can also have negative health effects and lead to such consequences as alcohol-related motor vehicle crashes and increased injuries. Current alcohol use in pregnant women is also linked to low birth weight babies, sudden infant death, and other developmental delays in children.

Data Source(s): BRFSS, 2011.

Summary: In 2011, 57 percent of adults in Western PHD reported drinking at least one alcoholic beverage within the past 30 days. This was somewhat lower than the statewide average of 60 percent.

Figure 3. Percent of adults by Public Health District who reported drinking during past 30 days: 2011
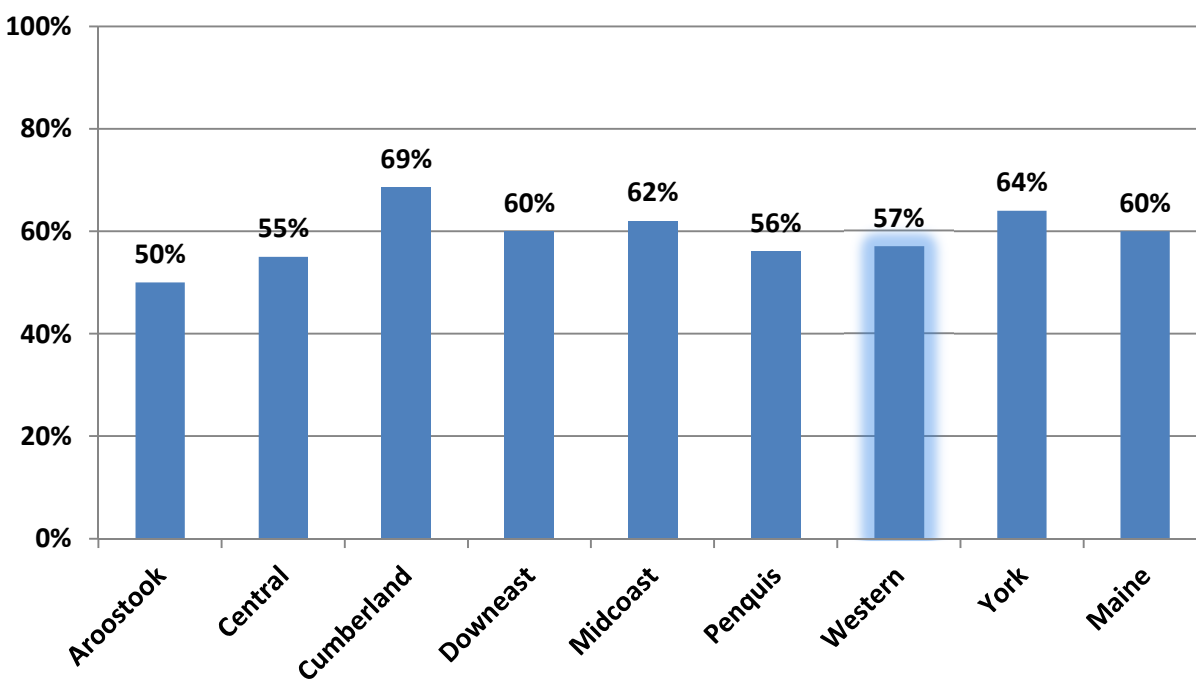
Source: BRFSS

Indicator Description: AT RISK FROM HEAVY ALCOHOL USE. This indicator examines the percentage of Maine residents who are at risk from heavy drinking in the past month. Heavy drinking is defined as two drinks per day for a man or one drink per day for a woman.

Why Indicator is Important: Heavy drinking increases the risk for many health and social related consequences. People who consume alcohol heavily are at increased risk for a variety of negative health consequences, including alcohol abuse and dependence, liver disease, certain cancers, pancreatitis, heart disease, and death. It has also been found that the more heavily a person drinks the greater the potential for problems at home, work, and with friends.[1]

Data Source(s): BRFSS, 2011.

Summary: In 2011, six percent of adults in the Western PHD indicated to be at risk from heavy alcohol use (1-2 drinks per day). This rate was slightly lower than the statewide average (7%).

Figure 4. Percent of adults by Public Health District who reported heavy drinking during past 30 days: 2011
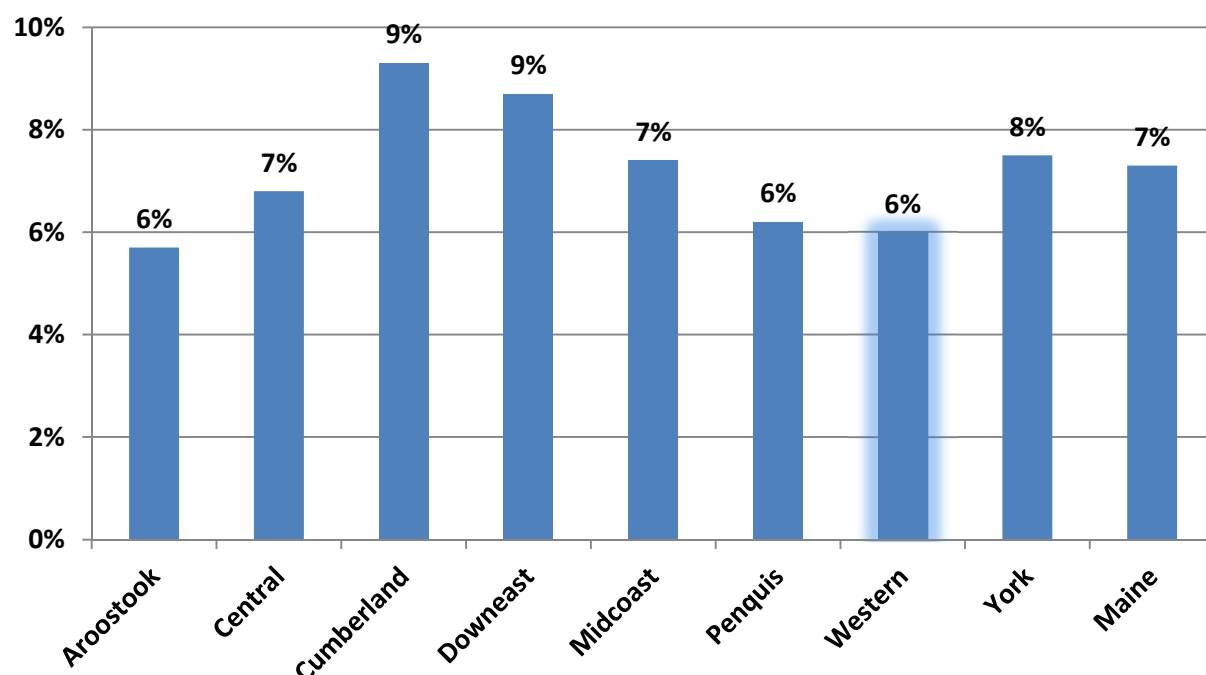
Source: BRFSS

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[1] Citation from Alcoholscreening.org, a service of Join Together and the Boston University School of Public Health. Retrieved from http://www.alcoholscreening.org/Learn-More.aspx?topicID=8&articleID=26 on 5/5/2011.

Indicator Description: HIGH-RISK ALCOHOL USE AMONG ADULTS. This indicator reflects the percentage of adults who reported engaging in high-risk "binge" drinking within the past 30 days. This is defined as five or more drinks in one sitting for a male and four or more drinks in one sitting for a female.

Why Indicator is Important: Binge drinking is considered to be a type of high-risk drinking, meaning it increases the risk for many health- and social-related consequences. It has been linked to injury (such as falls, fights, and suicides), violence, crime rates, motor vehicle crashes stroke, chronic liver disease, addiction, and some types of cancer.

Data Source(s): BRFSS, 2011.

Summary: In 2011, 15 percent of adults in the Western public health district indicated they engaged in binge drinking during the past 30 days. This was slightly higher than the statewide average (16%) and among the lowest rates of the public health districts.

Figure 5. Percent of adults by Public Health District who reported binge drinking during past 30 days: 2011
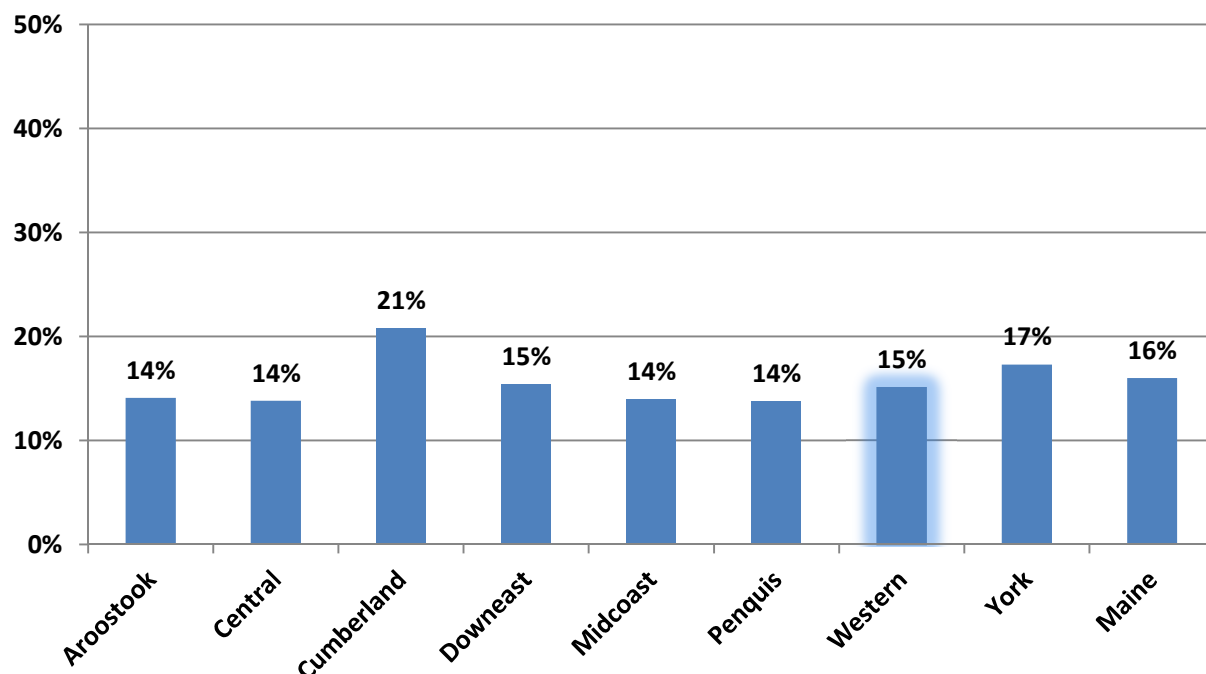
Source: BRFSS

Summary: In 2011, the highest rate of binge drinking in Western PHD was among the 26 to 35 year old population at 26 percent; this was slightly lower than the statewide rate among 26 to 35 year olds (28%). The second highest binge drinking rate in Western PHD was among 18 to 25 year olds with 22%, followed by 36 to 49 year olds (18%), and 50 and older residents (9%).

Figure 6. Percent of adults by Public Health District who reported binge drinking in past 30 days by age group: 2011
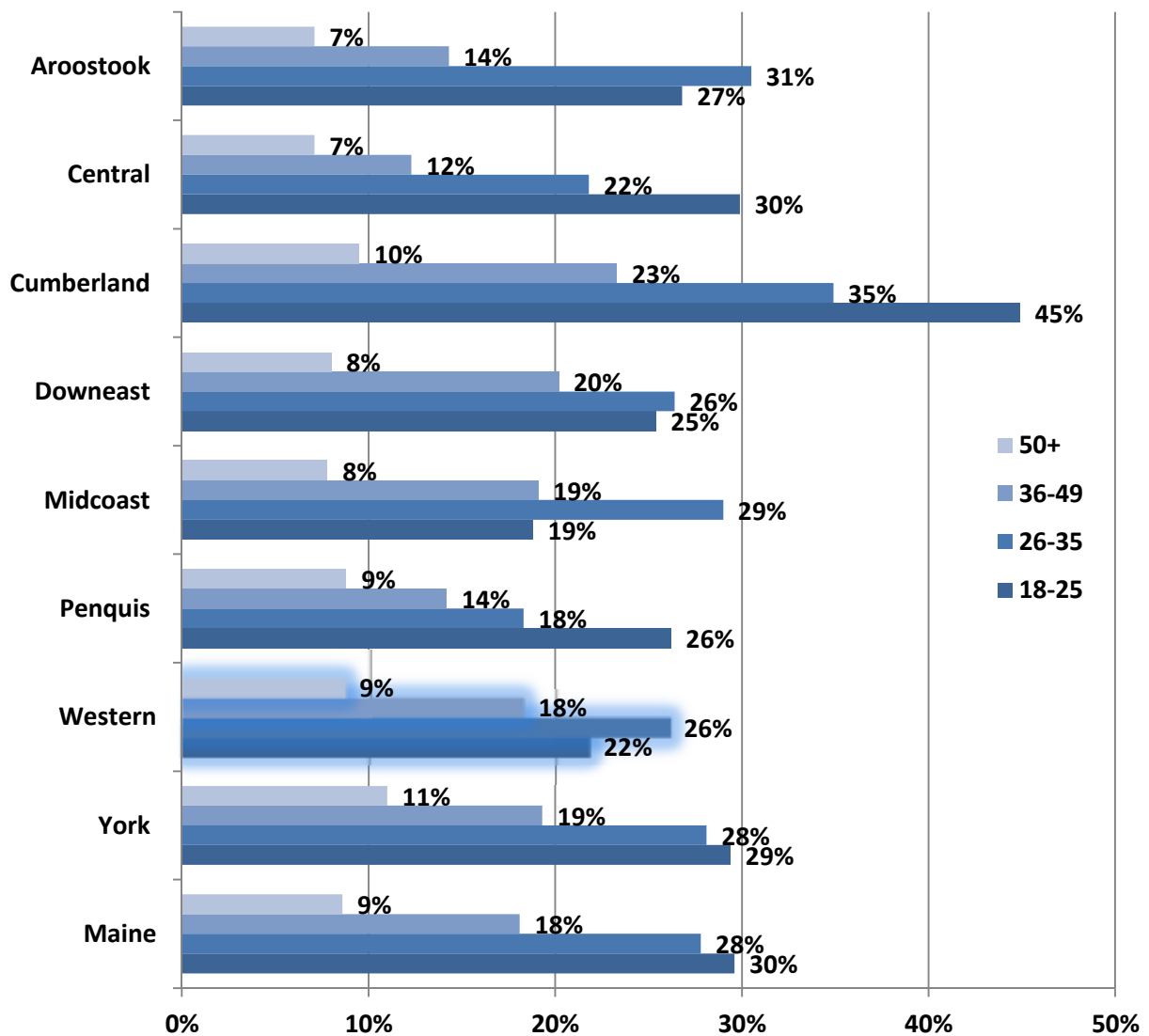
Source: BRFSS

Indicator Description: SMOKING AMONG YOUTH. This indicator illustrates the percentage of Maine high school students who reported smoking a cigarette on at least one occasion within 30 days prior to the survey.

Why Indicator is Important: Use of tobacco is associated with a greater risk of negative health outcomes, including cancer, cardiovascular, and chronic respiratory diseases, as well as death.

Data Source(s): MIYHS, 2009-2011.

Summary: In 2011, 15 percent of high school students in Western PHD reported having smoked one or more cigarettes in the past 30 days. This is slightly lower than the state average (16%).

Figure 7. Percent of high school students in Western PHD who reported smoking one or more cigarettes during past 30 days: 2009, 2011
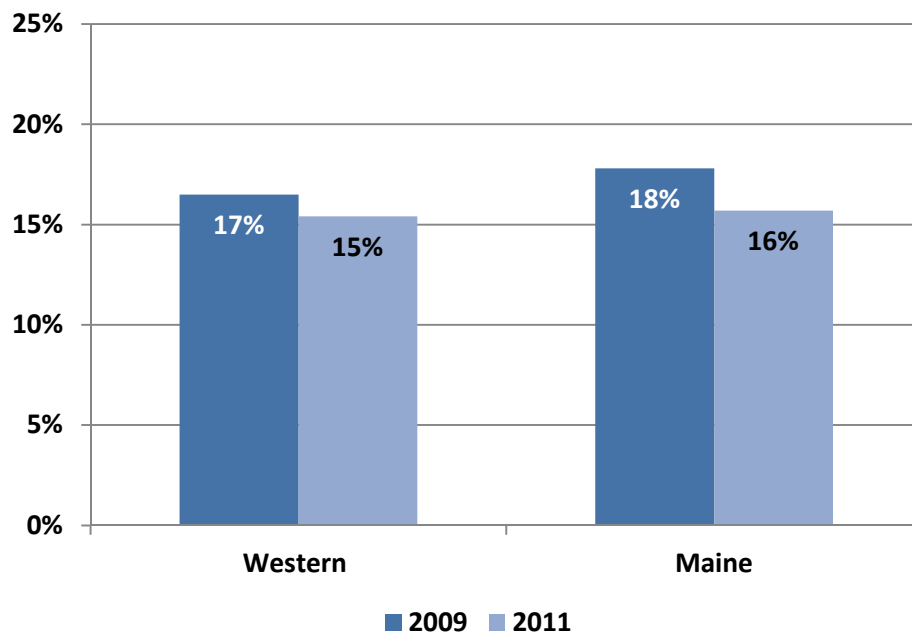
Source: MIYHS

Indicator Description: SMOKELESS TOBACCO AMONG YOUTH. This indicator illustrates the percentage of Maine high school students who reported using smokeless tobacco on at least one occasion within 30 days prior to the survey.

Why Indicator is Important: Use of tobacco is associated with a greater risk of negative health outcomes, including cancer, cardiovascular and chronic respiratory diseases, as well as death.

Data Source(s): MIYHS, 2009-2011.

Summary: In 2011, the percent of high school students in Western PHD who have used smokeless tobacco in the past 30 days is slightly lower than the statewide average (7% and 8%, respectively).

Figure 8. Percent of high school students in Western PHD who used smokeless tobacco in the past 30 days: 2009, 2011
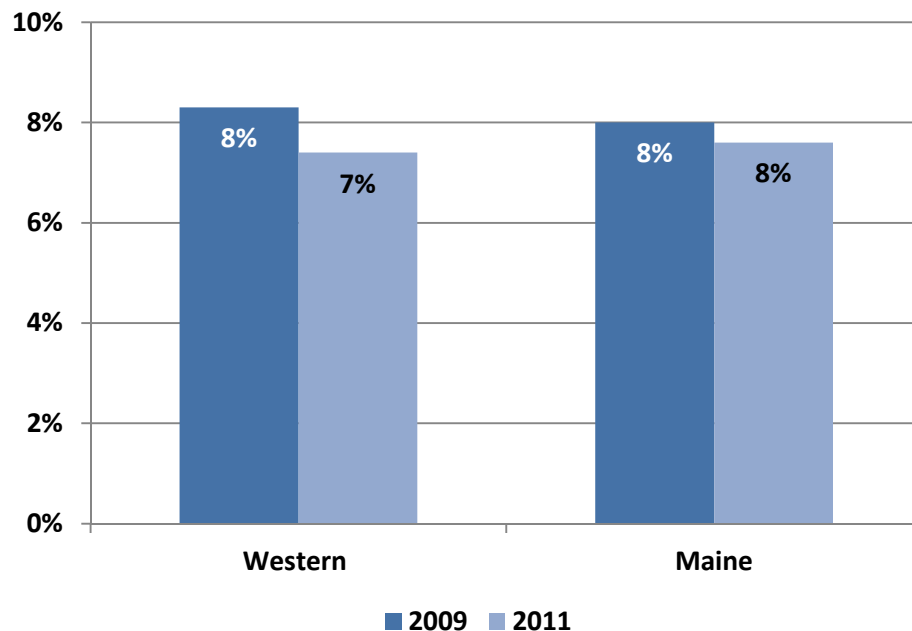
Source: MIYHS

Indicator Description: SMOKING AMONG ADULTS. This indicator illustrates the percentage of Maine adults who reported using cigarettes on at least one occasion within 30 days prior to the survey.

Why Indicator is Important: Smoking is associated with a greater risk of negative health outcomes, including cancer, cardiovascular and chronic respiratory diseases, as well as death.

Data Source(s): BRFSS, 2011.

Summary: In 2011, one quarter (25%) of adults in Western PHD indicated they had smoked a cigarette in the past 30 days. This was higher than the statewide average (23%).

Figure 9. Percent of adults by Public Health District who reported smoking a cigarette in the past 30 days: 2011
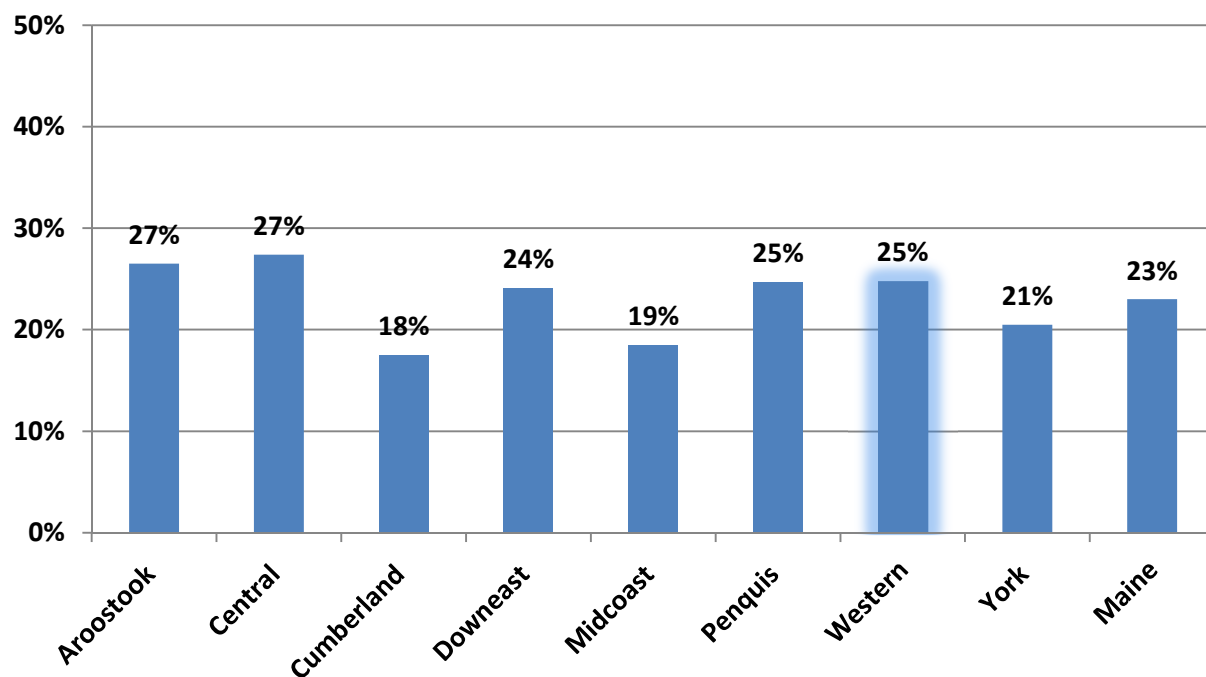
Source: BRFSS

Indicator Description: MISUSE OF PRESCRIPTION DRUGS AMONG YOUTH. This indicator presents the percentage of Maine high school students who reported using prescription drugs that were not prescribed to them by a doctor within 30 days prior to the survey.

Why Indicator is Important: Young people are increasingly using available prescription drugs, including stimulants and opiates, instead of illegal drugs to get high. Abuse of prescription drugs may lead to consequences such as unintentional poisonings or overdose, automobile crashes, addiction, and increased crime.

Data Source(s): MIYHS, 2009-2011.

Summary: In 2011, seven percent of high school students in Western PHD reported having taken prescription drugs not prescribed to them by a doctor one or more times in the past 30 days. This represented a decrease from 2009 and was the same as the statewide average.

Figure 10. Percent of high school students in Western PHD who have taken prescription drugs not prescribed to them by a doctor: 2009, 2011
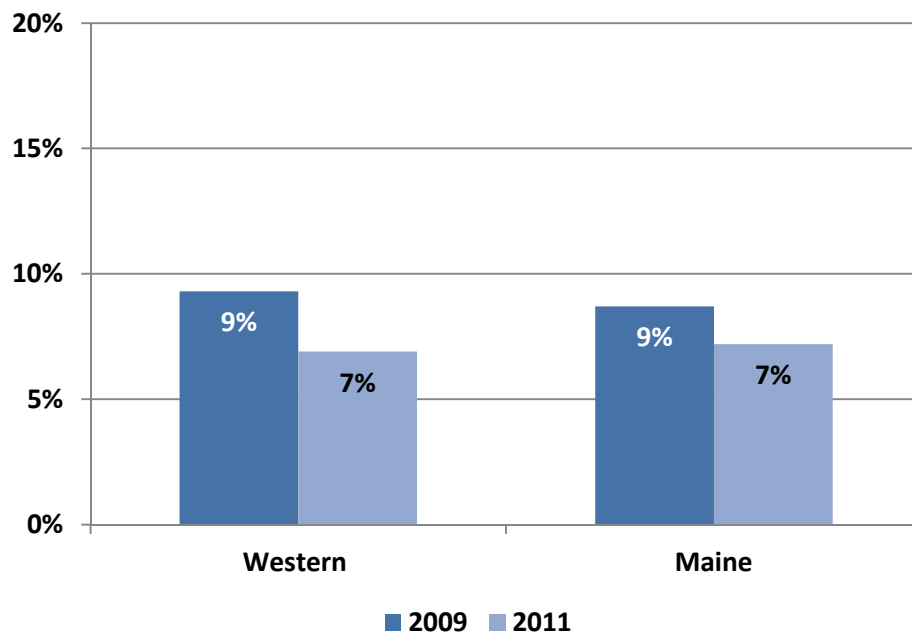
Source: MIYHS

Indicator Description: NONMEDICAL USE OF PRESCRIPTION PAIN RELIEVERS AMONG MAINERS AGE 12 AND OLDER. This measure reflects the percentage of adults who reported using prescription drugs, particularly prescription pain relievers, for reasons other than their intended purpose. Because of small sample sizes, survey data from multiple years must be combined in order to produce this estimate.

Why Indicator is Important: Mainers are increasingly using available prescription drugs, particularly pain relievers, instead of illegal drugs to get high. Abuse of prescription drugs may lead to consequences such as unintentional poisonings, overdose, dependence and increased crime.

Data Source(s): NSDUH, 2006-08 and 2008-10.

Summary: In 2008-10, 13 percent of 18 to 25 year olds in Western PHD reported non-medical use of prescription pain relievers during the past 30 days; this was higher than any other age group within the district. The second highest rate in Western PHD occurred among 12 to 17 year olds at 6% which did not vary across public health districts. Although not shown, rates of non-medical pain reliever among residents 12 and older in Western PHD changed very little from 2006-08 (4.4%) to 2008-10 (4.5%).

Figure 11. Percent of population 12 years old or older who used prescription pain relievers in past year for nonmedical use, by Public Health District: 2008-10

	Aroostook /Downeast	Central	Cumber.	Midcoast	Penquis	Western	York	Maine
12 to 17	6%	6%	6%	6%	6%	6%	6%	6%
18 to 25	12%	13%	14%	13%	12%	13%	12%	13%
26+	3%	3%	3%	3%	3%	3%	3%	3%
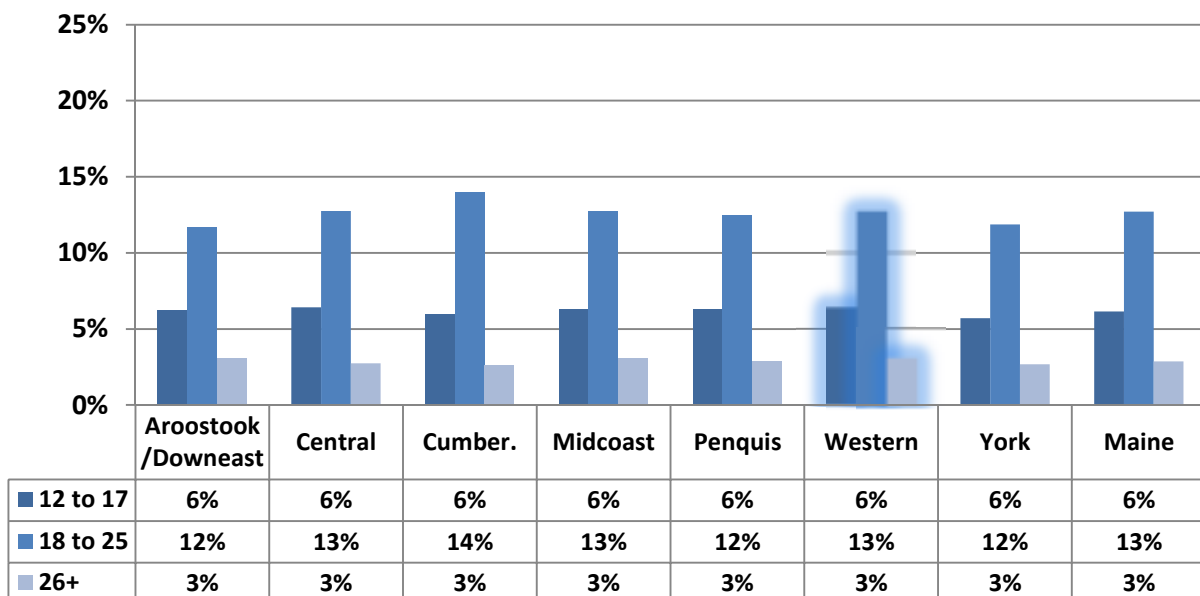
Source: NSDUH

Indicator Description: CURRENT MARIJUANA USE. This measure shows the percentage of Maine residents who reported using marijuana in the past 30 days. This is presented for high school students and adults in Maine.

Why Indicator is Important: Marijuana can be addictive and is associated with increased risk for respiratory illnesses and memory impairment. Even occasional use can have consequences on learning and memory, muscle coordination, and mental health symptoms.

Data Source(s): MIYHS, 2009-2011; BRFSS 2011.

Summary: In 2011, twenty-two percent of high school students in Western PHD reported having used marijuana one or more times in the past 30 days. This represented the same rate as the statewide average.

Figure 12. Percent of high school students in Western PHD who have used marijuana during past 30 days: 2009, 2011
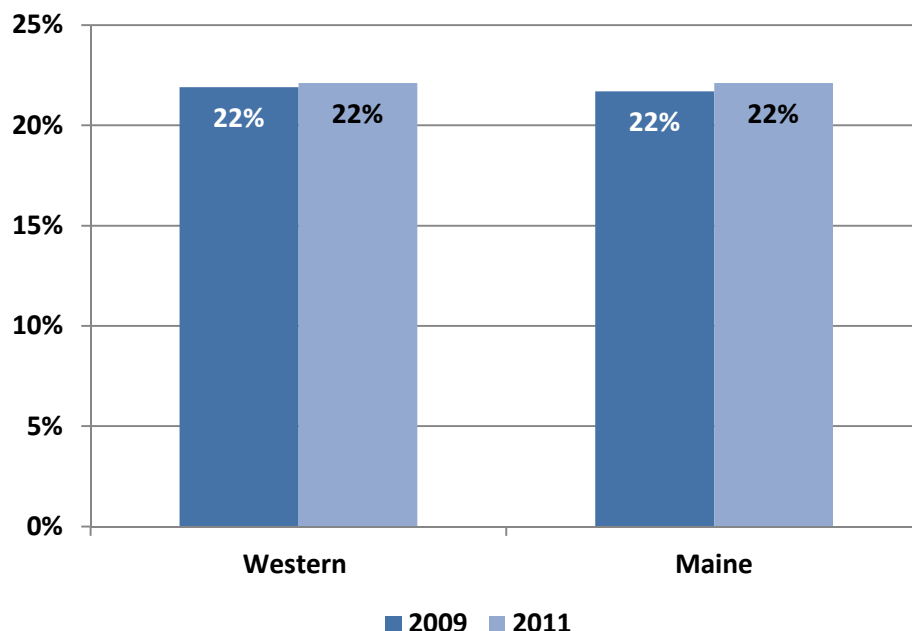
Source: MIYHS

Summary: Among Western PHD adults, nine percent reported using any marijuana within the past 30 days, seven percent reported using marijuana recreationally, and two percent reported using marijuana for medical reasons. With the inception of medicinal marijuana in Maine, marijuana medical use rates are expected to increase over the next few years.

Figure 13. Percent of adults who have used marijuana during the past 30 days, by Public Health District: 2011
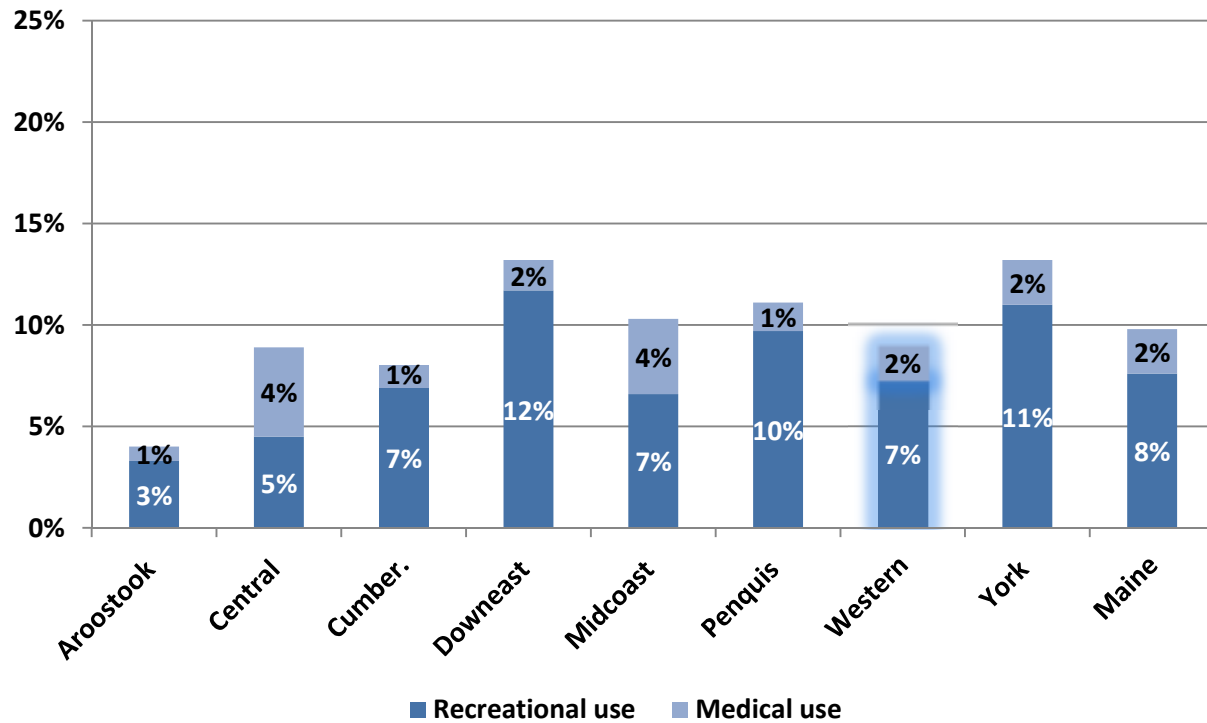
Source: BRFSS

Indicator Description: LIFETIME COCAINE USE AMONG YOUTH. This indicator illustrates the percentage of Maine high school students who used cocaine at least once in their lifetime (i.e., ever).

Why Indicator is Important: Cocaine is highly addictive. Use of cocaine is associated with adverse health effects such as cardiac events, seizures, and stroke. It also increases the risk of cognitive impairment, injury, and crime.

Data Source(s): MIYHS, 2009-2011.

Summary: In 2011, Western PHD had the same percent of high school students reporting that they had used cocaine (in any form) during their lifetime as the statewide average (7%). Both rates for Western PHD and the state decreased by three percentage points from 2009 to 2011.

Figure 14. Percent of high school students in Western PHD that have used cocaine in any form during their lifetime: 2009, 2011
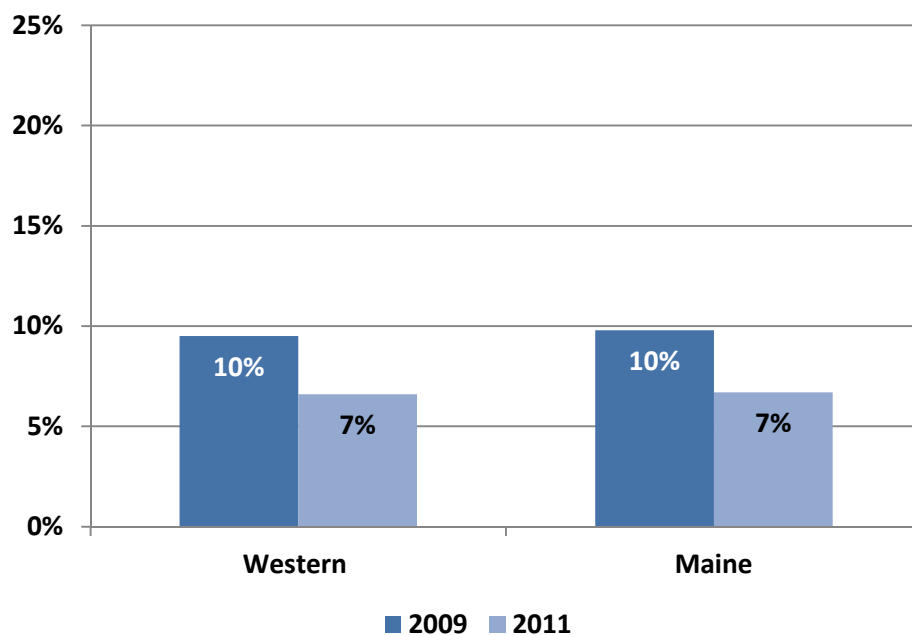
Source: MIYHS

Consequences Resulting from Substance Use and Abuse

Both individuals and communities suffer the consequences of substance abuse in terms of increased health care needs and criminal justice resources. While a great deal of information regarding substance use can be obtained from the data described in the previous section, information on the effects of that use on individuals and communities can be derived from what has come to be called "consequence" data. Consequences are defined as the social, economic and health problems associated with the use of alcohol and illicit drugs. Examples are things such as illnesses related to alcohol, drug overdose deaths, property and personal crimes, as well as driving accidents, poisonings and suicides that involve alcohol or drugs.

The findings regarding rates of consequences related to substance abuse for Western PHD are somewhat mixed. For example, the post-2006 violent crime rates and the post-2006 drug-related arrest rates are higher on average than found statewide. Conversely, the alcohol-related arrest rates, alcohol-related crash rates, and drug-related overdose death rates are lower on average than the statewide rates. A number of indicators in this section indicate fluctuating findings. In 2011, Western PHD had the highest rate of substance-related inpatient admissions among public health districts.

Indicator Description: ANNUAL VIOLENT CRIME RATE. This indicator shows the number of violent crimes reported to the police, per 10,000 people. Violent crimes include simple and aggravated assaults, sexual assaults, and robberies. The rate per 10,000 allows us to see frequency with which an occurrence shows up within a population over time, as well as make relative comparisons between small and large population areas.

Operationalized as: $\left(\frac{\# \text{ of violent crimes}}{\text{population}}\right) \times 10,000$

Why Indicator is Important: Violence is associated with alcohol, though the causal pathway is not completely understood. Drinking on the part of the victim or a perpetrator can increase the risk of assaults and assault-related injuries. Approximately 23 percent of sexual assaults and 30 percent of physical assaults are attributable to alcohol. Reported violent crimes are an under-report of the total number of actual violent crimes.

Data Source(s): DPS, UCR, 2006-2011.

Summary: In 2011, there were 14.7 violent crimes per 10,000 people in Western PHD; this was higher than the statewide rate (12.3 per 10,000) and the highest among public health districts. Western PHD's violent crime rate has remained relative stable since 2007.

Figure 15. Violent crime rate per 10,000, by Public Health District: 2006-2011

	2006	2007	2008	2009	2010	2011
Aroostook	6.8	9.4	5.7	6.0	7.4	8.3
Central	11.8	10.9	10.8	10.9	11.4	14.3
Cumberland	17.1	16.4	16.5	16.5	16.3	13.7
Downeast	10.4	9.4	18.7	12.6	18.4	11.7
Midcoast	6.2	6.2	6.2	6.0	7.1	6.8
Penquis	14.8	20.2	9.7	14.5	6.7	9.6
Western	12.7	15.0	14.2	14.3	14.0	14.7
York	11.0	11.6	10.9	10.8	11.3	14.0
Maine	11.5	11.8	11.8	11.7	12.0	12.3
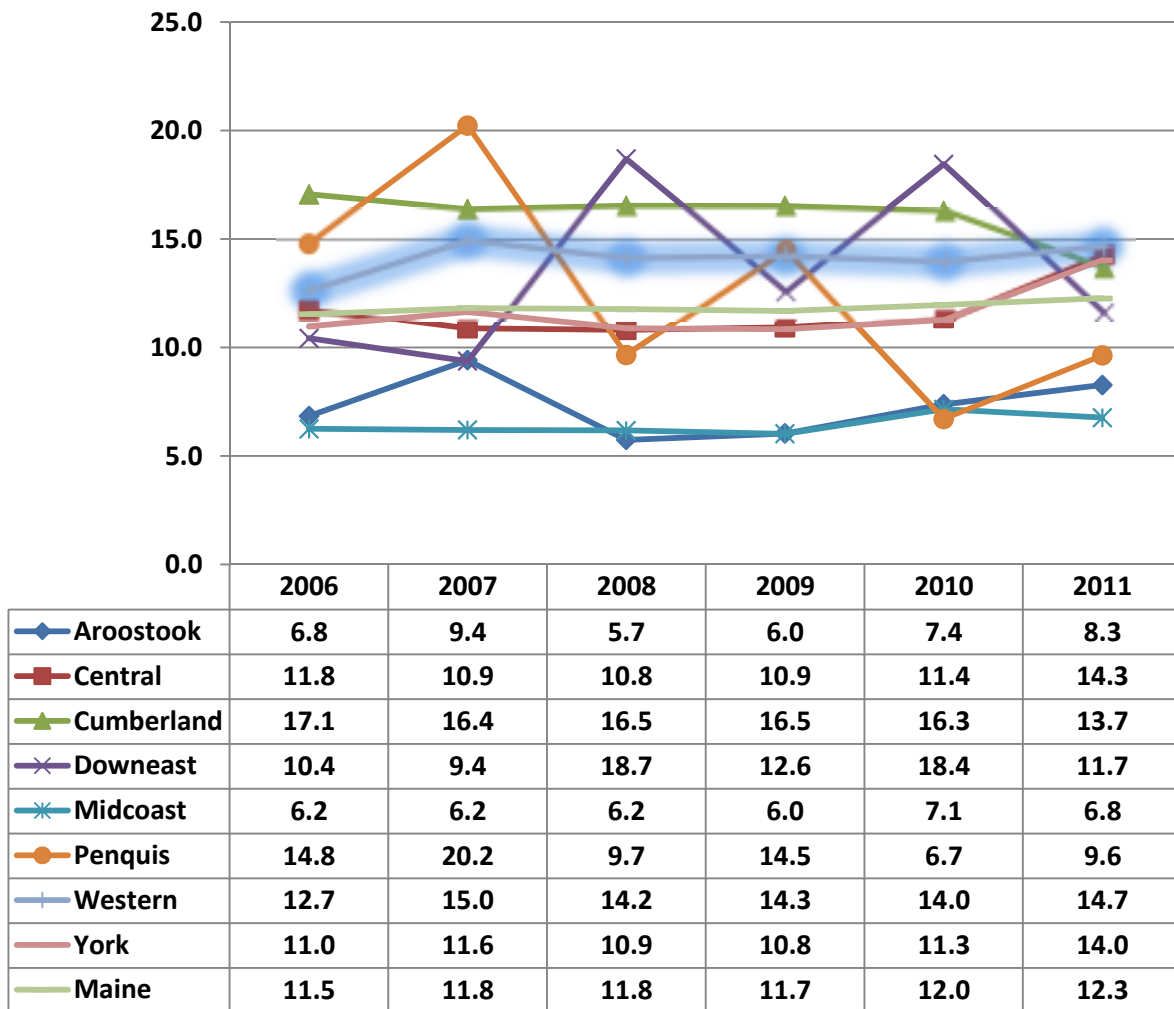
Source: DPS; UCR

Indicator Description: ANNUAL ALCOHOL-RELATED ARREST RATE. This indicator reflects arrests related to alcohol per 10,000 people. Alcohol-related arrests include Operating Under the Influence (OUI), liquor law violations, and drunkenness. The rate per 10,000 allows us to see frequency with which an occurrence shows up within a population over time, as well as make relative comparisons between small and large population areas.

Operationalized as: $\left(\frac{\# \ of \ alcohol \ arrests}{population} \right) \times 10,000$

Why Indicator is Important: OUI and liquor law arrest rates can be an indication of the rate of criminal behavior, but it is important to note that they are also an *indication of the level of law enforcement*. Arrest rates are expected to increase with increased enforcement regardless of whether a decline in criminal behavior is observed. The educational component of Maine's Driver Education and Evaluation Program serviced 5,500 Maine residents in 2012.

Data Source(s): DPS, UCR, 2006-2011.

Summary: In 2011, Western PHD had 69.3 alcohol-related arrests per 10,000 people, compared to the statewide rate of 73.5 per 10,000. Western PHD held the fourth highest alcohol-related arrest rate among public health districts in 2011. Alcohol-related arrest rates have been declining overall for both Western PHD and Maine since 2006.

Figure 16. Alcohol-related arrest rate per 10,000, by Public Health District: 2006-2011

	2006	2007	2008	2009	2010	2011
Aroostook	86.6	77.9	73.1	64.8	64.6	60.4
Central	96.6	103.2	86.8	94.6	87.8	88.5
Cumberland	86.0	97.7	87.9	91.4	84.6	76.7
Downeast	98.8	86.8	73.4	83.9	85.8	65.9
Midcoast	79.1	73.3	76.7	79.6	67.8	62.2
Penquis	81.1	77.6	95.5	95.4	82.5	56.9
Western	94.3	91.2	81.3	87.1	82.5	69.3
York	120.9	119.9	121.0	114.5	103.6	89.5
Maine	96.3	95.7	91.8	94.2	84.4	73.5
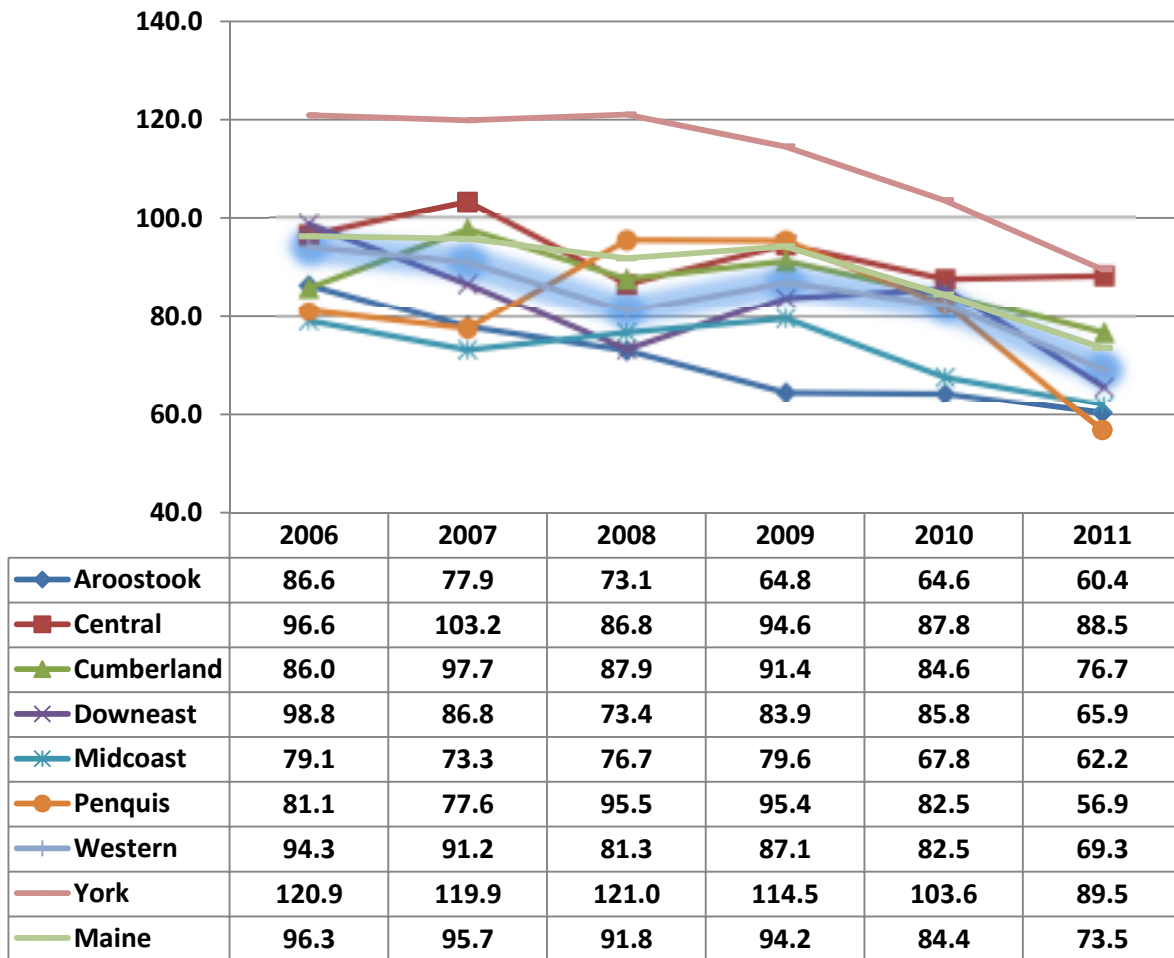
Source: DPS; UCR

Indicator Description: ANNUAL DRUG-RELATED ARREST RATE. This indicator reflects the number of arrests that were related to drugs per 10,000 people. Drug-related arrests include manufacturing, sales, and possession. The rate per 10,000 allows us to see frequency with which an occurrence shows up within a population over time as well as make relative comparisons between small and large population areas.

Operationalized as: $\left(\frac{\# \ of \ drug \ arrests}{population}\right) \times 10,000$

Why Indicator is Important: Arrest rates for drug sales, manufacturing and drug possession can be an indication of the rate of criminal behavior, but it is important to note that they are also an *indication of the level of law enforcement*. Arrests rates are expected to increase with increased enforcement regardless of whether a decline in criminal behavior is observed.

Data Source(s): DPS, UCR, 2006-2011.

Summary: For five out of the past six years shown, Western PHD held the highest drug-related arrest rates. In 2011, the rate fell to approximately 46 drug-related arrests per 10,000 people in Western PHD; this was lower compared to statewide average (42 per 10,000 people) and the third lowest rate among public health districts.

Figure 17. Drug-related arrest rate per 10,000, by Public Health District: 2006-2011

	2006	2007	2008	2009	2010	2011
Aroostook	35.9	41.9	34.8	41.1	42.7	46.1
Central	38.5	34.6	40.3	40.0	42.7	31.6
Cumberland	40.8	45.0	44.1	39.7	39.9	43.4
Downeast	43.3	38.6	30.6	33.6	37.9	36.2
Midcoast	37.4	39.1	45.8	52.0	52.5	48.3
Penquis	41.5	47.6	40.1	45.5	45.9	49.4
Western	53.7	48.4	56.7	53.1	54.2	40.4
York	44.7	47.5	49.6	45.6	45.6	43.0
Maine	43.8	43.4	43.8	44.6	45	42.4

Source: DPS; UCR

Indicator Description: DRUG OFFENSE ARRESTS BY TYPE. This indicator reflects drug offense arrests made by the Maine's Drug Enforcement Agency, overall and by drug type. The MDEA, through its eight regional multi-jurisdictional task forces, is the lead state agency in confronting drug trafficking crime. This indicator differs from the previous drug-related arrest data in that it only tracks MDEA efforts and does not encompass all activity within Maine law enforcement agencies.

Why Indicator is Important: Drug offense arrest rates can be an indication of the rate of criminal behavior, but it is important to note that they are also an indication of the level of law enforcement. Drug arrest rates are expected to increase with increased enforcement regardless of whether a decline in criminal behavior is observed.

Data Source(s): MDEA-UCR, 2007-2012

Summary: Since 2007, Western PHD's drug offense arrest rates have aligned closely with those of the state. In 2011, there were 5.1 drug offense arrests per 10,000 residents in Western PHD; this was slightly higher than the statewide average (4.8 arrests per 10,000) and the fourth highest rate among public health districts. Most Drug offense arrests in Western PHD were related to pharmaceutical narcotics (5.9 arrests per 10,000).

Figure 18. Drug offense arrests per 10,000 residents, by Public Health District: 2007-2012

	2007	2008	2009	2010	2011	2012
Aroostook	10.3	9.9	9.0	10.3	7.1	11.0
Central	2.7	2.6	5.2	1.8	1.8	2.5
Cumber.	2.7	2.5	3.3	4.7	3.5	2.5
Downeast	8.9	4.8	7.9	8.8	7.1	7.4
Midcoast	2.5	10.0	12.2	14.2	7.8	10.3
Penquis	4.8	5.2	6.0	6.3	4.8	3.5
Western	5.2	6.0	7.4	6.6	4.3	5.1
York	2.5	2.7	5.6	4.3	3.7	3.3
Maine	4.1	4.8	6.5	6.5	4.6	4.8
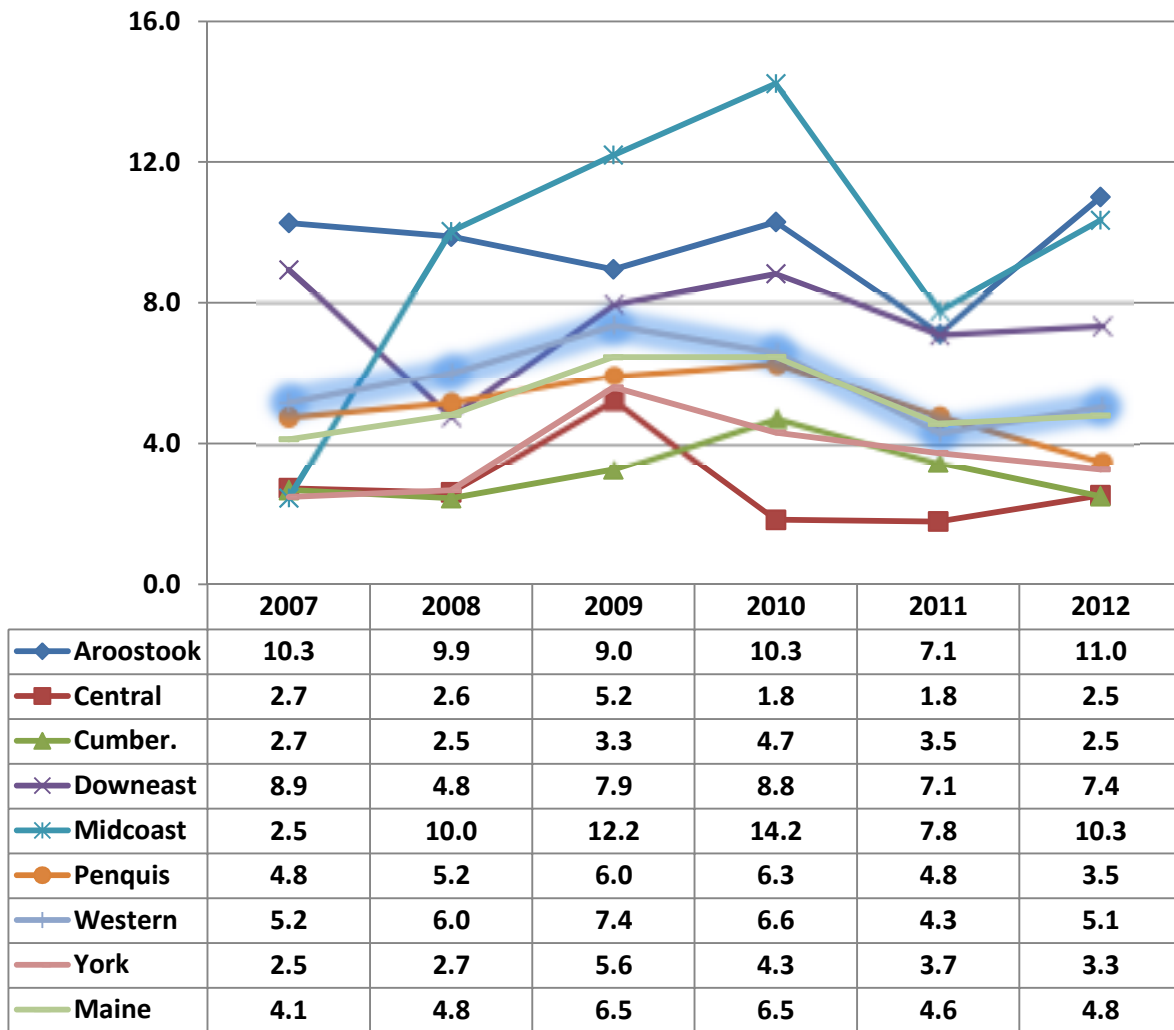
Source: MDEA-UCR

Figure 19. Drug offense arrests per 10,000 residents in Western PHD, by drug type: 2009-12

	Cocaine/crack	Heroin	Marijuana	Methamphetamine	Pharm-narcotic
■ Maine	3.4	1.2	2.7	0.6	5.9
■ Western	4.4	0.6	3.6	0.2	4.9
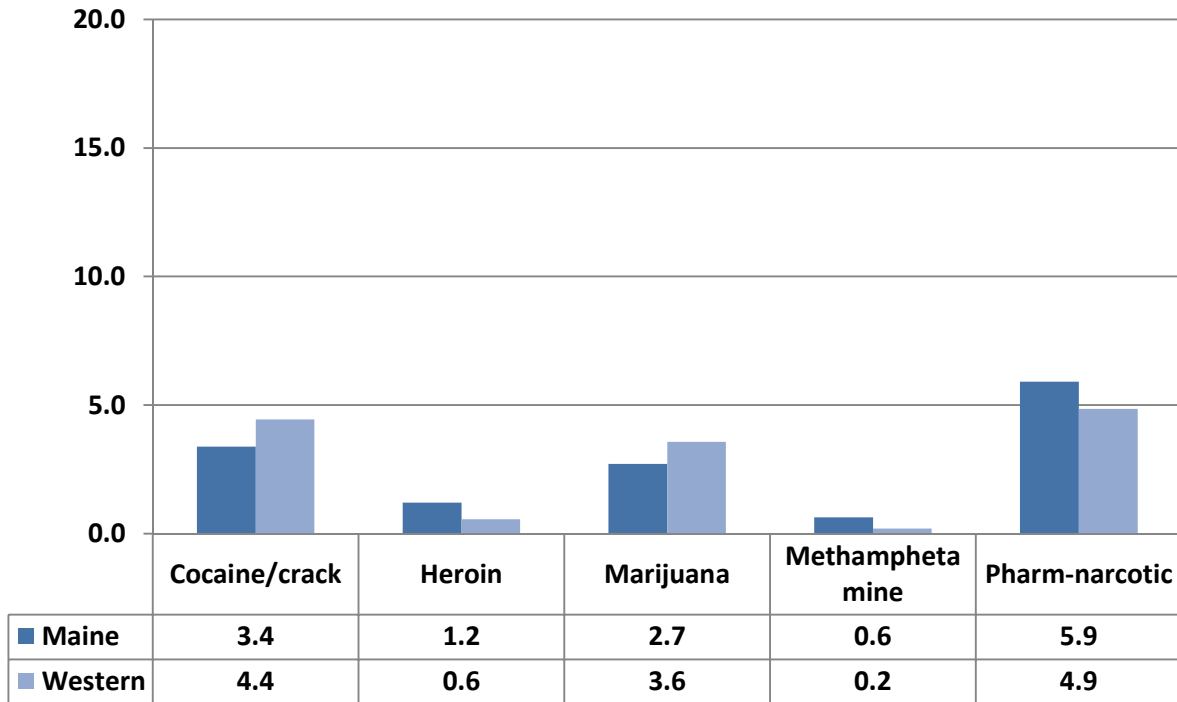
Source: MDEA-UCR

Indicator Description: DRINKING AND DRIVING AMONG YOUTH. This measure shows the proportion of high school students who reported that they drove a car after consuming alcohol at least once within 30 days prior to taking the survey.

Why Indicator is Important: Operating a vehicle after consuming alcohol increases the risk of motor vehicle crashes, injuries and death.

Data Source(s): MIYHS, 2009-2011.

Summary: Five percent of high school students in Western PHD reported driving a vehicle at least once after drinking alcohol in the past 30 days. This was the same as the statewide average.

Figure 20. Percent of high school students in Western PHD who reported drinking and driving during the past 30 days: 2009, 2011
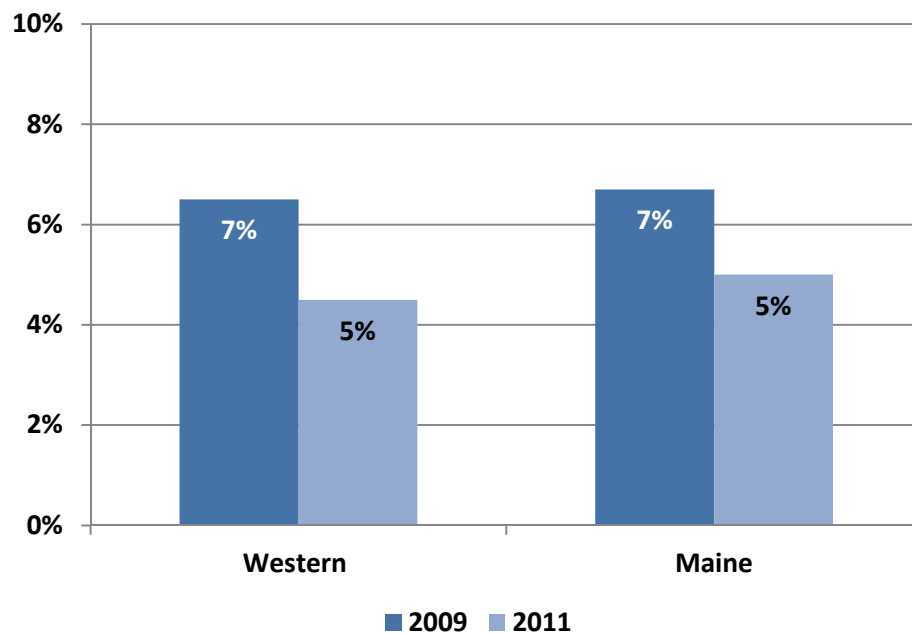
Source: MIYHS

Indicator Description: YOUTH AS PASSENGERS IN VEHICLES DRIVEN BY INDIVIDUALS USING ILLEGAL DRUGS. This measure shows the proportion of high school students who reported that within 30 days prior to taking the survey they were a passenger in a car being operated by an individual who had consumed illegal drugs.

Why Indicator is Important: Operating a vehicle while under the influence of drugs increases the risk of motor vehicle crashes, injuries and death.

Data Source(s): MIYHS, 2009-2011.

Summary: In 2011, 21 percent of high school students in Western PHD reported that, within the past 30 days, they had been passengers in a vehicle operated by someone who had taken illegal drugs. This was slightly lower than the statewide average (22%).

Figure 21. Percent of high school students in Western PHD who rode in a vehicle driven by someone who had taken illegal drugs: 2009, 2011
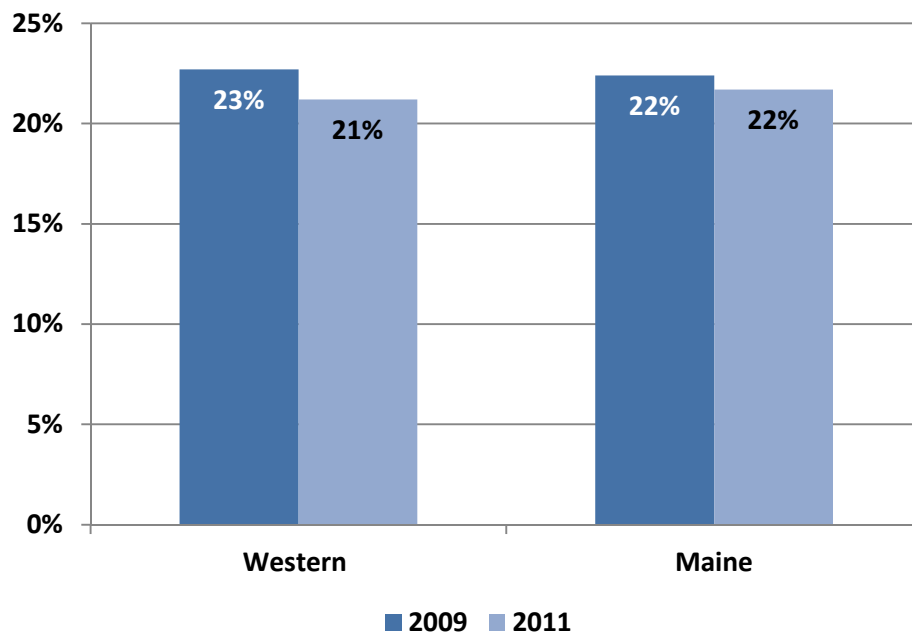
Source: MIYHS

Indicator Description: ALCOHOL/DRUG-INVOLVED MOTOR VEHICLE CRASH RATE. This indicator shows the number of motor vehicle crashes in which alcohol or drugs were a factor per 10,000 people. Due to new data collection regulations, crash rate data is no longer separated by alcohol and drugs. Alcohol and drugs are now combined into one rate. Alcohol/drug-involved crashes means that at least one driver had consumed alcohol or drugs prior to the crash. The rate per 10,000 allows us to see frequency with which an occurrence shows up within a population over time, as well as make relative comparisons between small and large population areas.
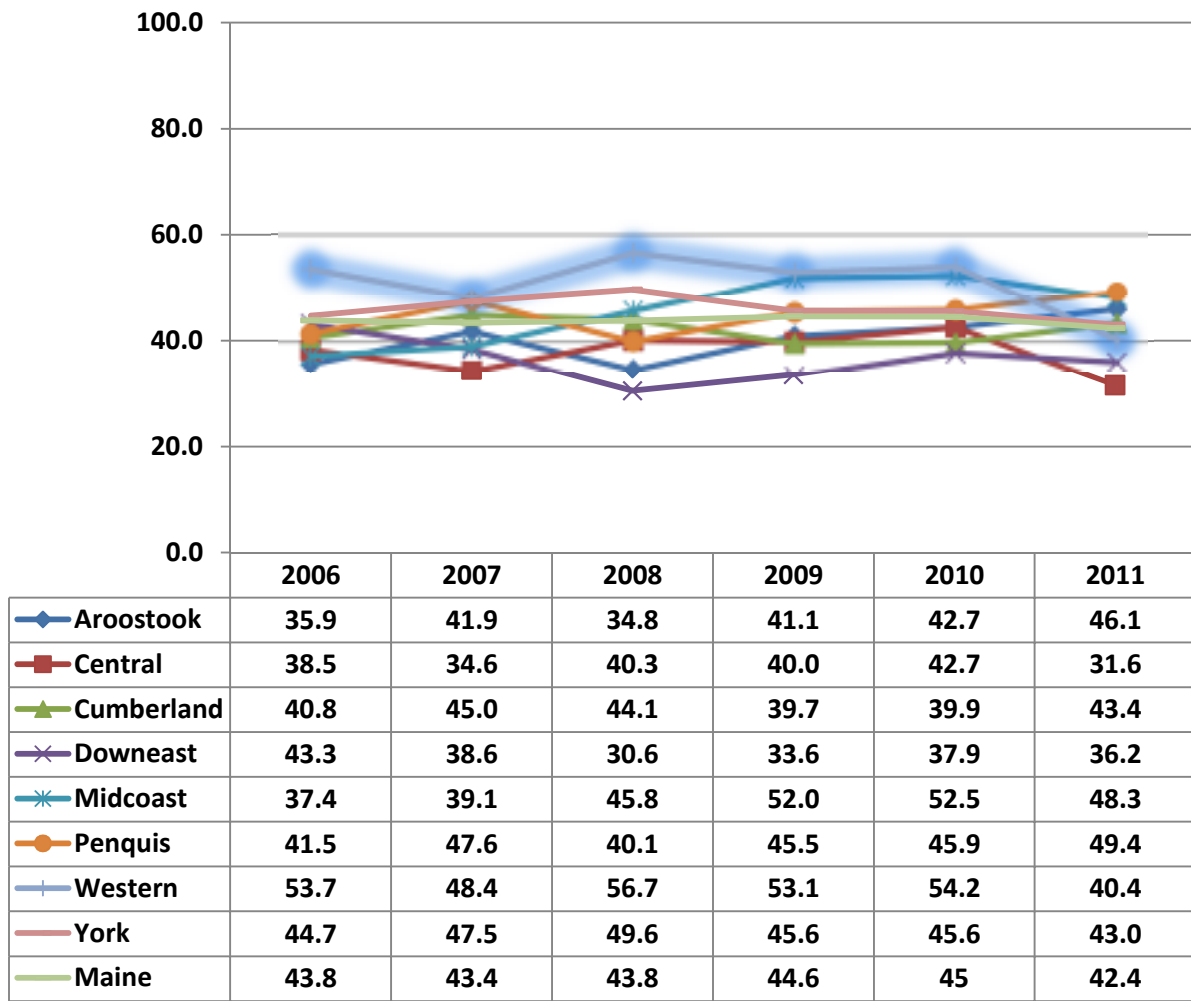
Operationalized as: $\left(\frac{\# \ of \ alcohol/drug-involved \ crashes}{population} \right) \times 10,000$

Why Indicator is Important: Motor vehicle crashes are the second-leading cause of traumatic brain injury, with 27 percent of traumatic brain injuries occurring from motor vehicle crashes.[2] In the 2009, alcohol was attributed to 96 percent of the alcohol/drug-related crashes statewide.

Data Source(s): MDOT/MBHS, 2008-2012.

Summary: In Maine and Western PHD, rates of alcohol-related crashes have declined since 2008. Rates in Western PHD decreased from 12.7 alcohol-related crashes per 10,000 people in 2008 to 9 alcohol-related crashes per 10,000 people in 2012; this was slightly lower compared to the statewide rate (9.2 per 10,000 people).

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[2] *2007 Maine Injury Report*, Maine Center for Disease Control, Injury Prevention Program. Retrieved 5/17/2012 from http://www.maine.gov/dhhs/mecdc/population-health/inj/documents/2007maineinjuryreport.pdf

Figure 22. Alcohol/Drug-related motor vehicle crash rate per 10,000, by Public Health District: 2008-2012

	2008	2009	2010	2011	2012
Aroostook	8.1	7.8	8.8	5.3	6.6
Central	11.0	10.3	6.5	9.3	8.1
Cumber.	12.2	11.2	10.8	8.3	8.1
Downeast	11.1	13.4	13.7	11.9	13.0
Midcoast	14.4	13.8	10.9	10.1	11.2
Penquis	10.4	8.4	7.3	9.2	9.4
Western	12.7	12.3	10.0	8.3	9.0
York	14.0	12.6	12.3	9.6	9.7
Maine	12.1	11.4	10.4	9.0	9.2
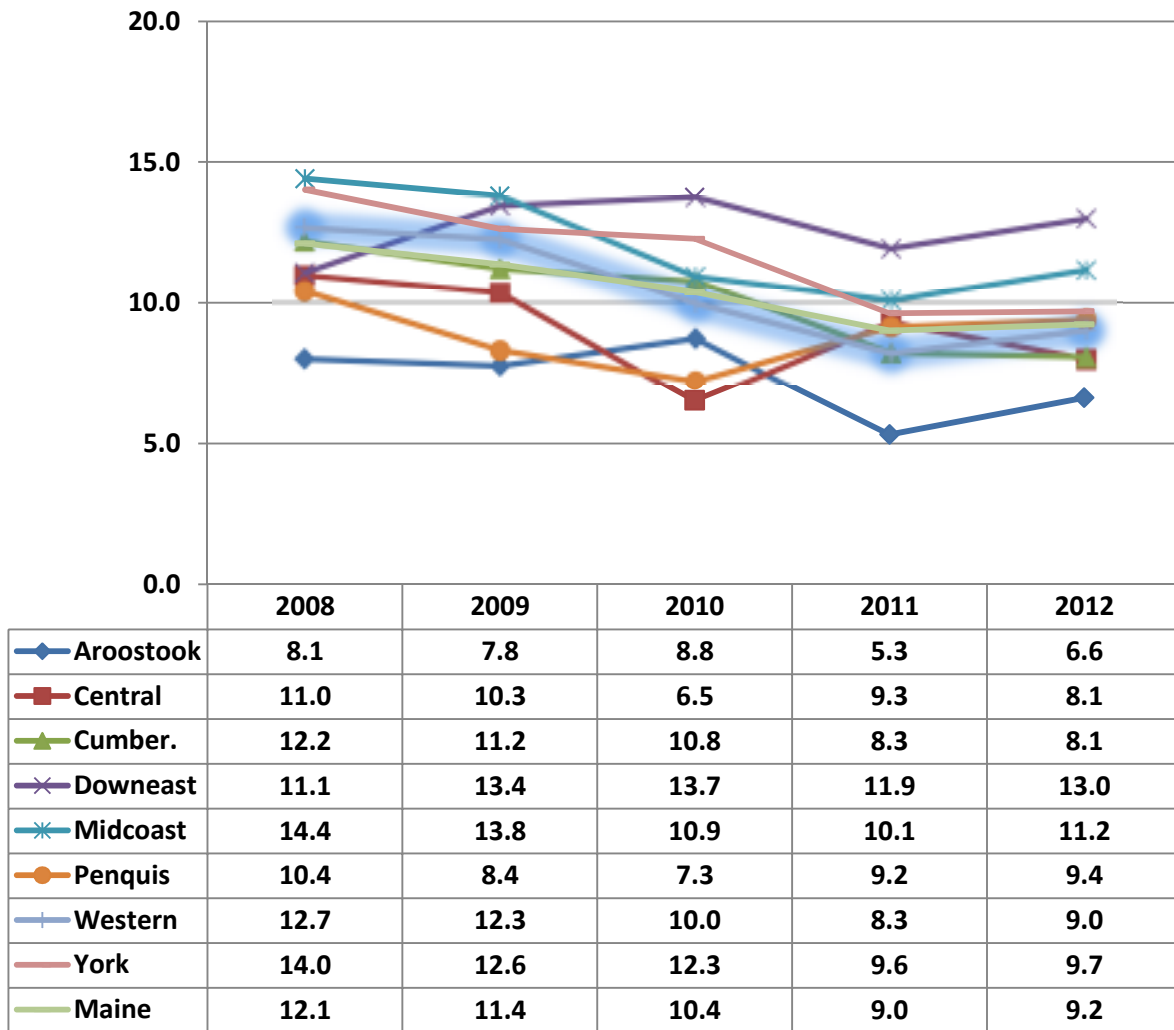
Source: MDOT/MBHS

Indicator Description: INPATIENT ADMISSIONS RELATED TO SUBSTANCE USE. This indicator shows the number of inpatient hospital admissions (per 10,000 people) where alcohol, opiates, or other drugs were recorded as the primary diagnosis for which services were sought at admission. "Inpatient" refers to a patient whose treatment needs at least one night's residence in a hospital. The substance for which treatment was received was identified through hospital codes (ICD-9 codes) and includes those related to alcohol and psychoactive substances (303-305). More than one substance may be involved in a single visit. The rate per 10,000 allows us to see frequency with which an occurrence shows up within a population over time, as well as make relative comparisons between small and large population areas.

Operationalized as: $\left(\frac{\# \ of \ inpatient \ hospitalizations}{population}\right) \times 10,000$

Why Indicator is Important: Hospital admissions related to substance use are an indication of injury sustained through substance use and the impact it has on the healthcare system.

Data Source(s): MHDO, 2010 and 2011.

Summary: The inpatient admissions rate due to substance abuse in Western PHD increased from 2010 (115.1 admissions per 10,000 residents) to 2011 (120.3 admissions per 10,000). In 2011, Western PHD had a higher inpatient rate than the state (95.3 admissions per 10,000) and had the highest rate among public health districts.

Figure 23. Inpatient hospital admissions (per 10,000 people) related to substance use*, by Public Health District: 2010, 2011

District	2010	2011
Aroostook	67.3	66.3
Central	103.6	109.0
Cumberland	107.9	106.8
Downeast	79.3	80.8
Midcoast	84.6	90.3
Penquis	86.8	70.9
Western	115.1	120.3
York	81.0	84.1
Maine	95.0	95.3

■ 2010 ■ 2011
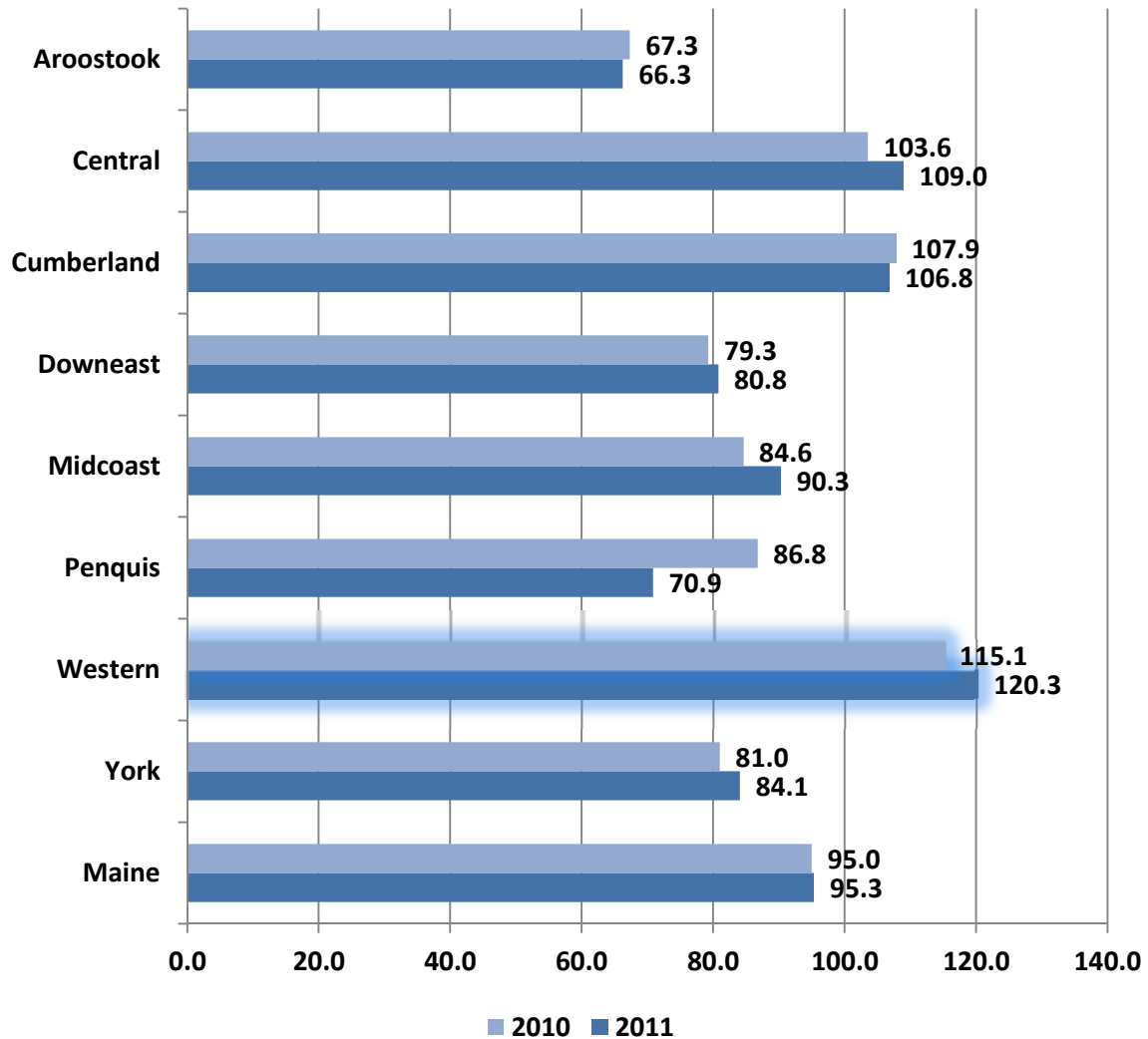
Source: MHDO
*Visits may involve multiple substances

Summary: In 2011, most inpatient admissions due to substance use in Western PHD were related to alcohol (83.8 admissions per 10,000), followed by opiates (30 admissions per 10,000), marijuana (21.6 admissions per 10,000), and other drugs (20.2 admissions per 10,000). Among public health districts, Western PHD held the highest inpatient rate due to alcohol as well as marijuana and the second highest inpatient rate related to other drugs.

Figure 24. Inpatient hospital admissions (per 10,000 people) related to substance use*, by Public Health District and drug type: 2011

	Alcohol	Opiate	Marijuana	Other drugs
Aroostook	39.4	13.0	14.7	17.4
Central	70.4	30.3	20.8	20.9
Cumberland	73.9	32.8	16.3	29.9
Downeast	53.3	21.2	10.5	12.8
Midcoast	54.6	28.7	13.9	18.4
Penquis	41.2	20.6	11.2	13.4
Western	83.8	30.0	21.6	20.2
York	54.0	26.4	15.0	21.7
Maine	62.3	27.2	16.1	20.9
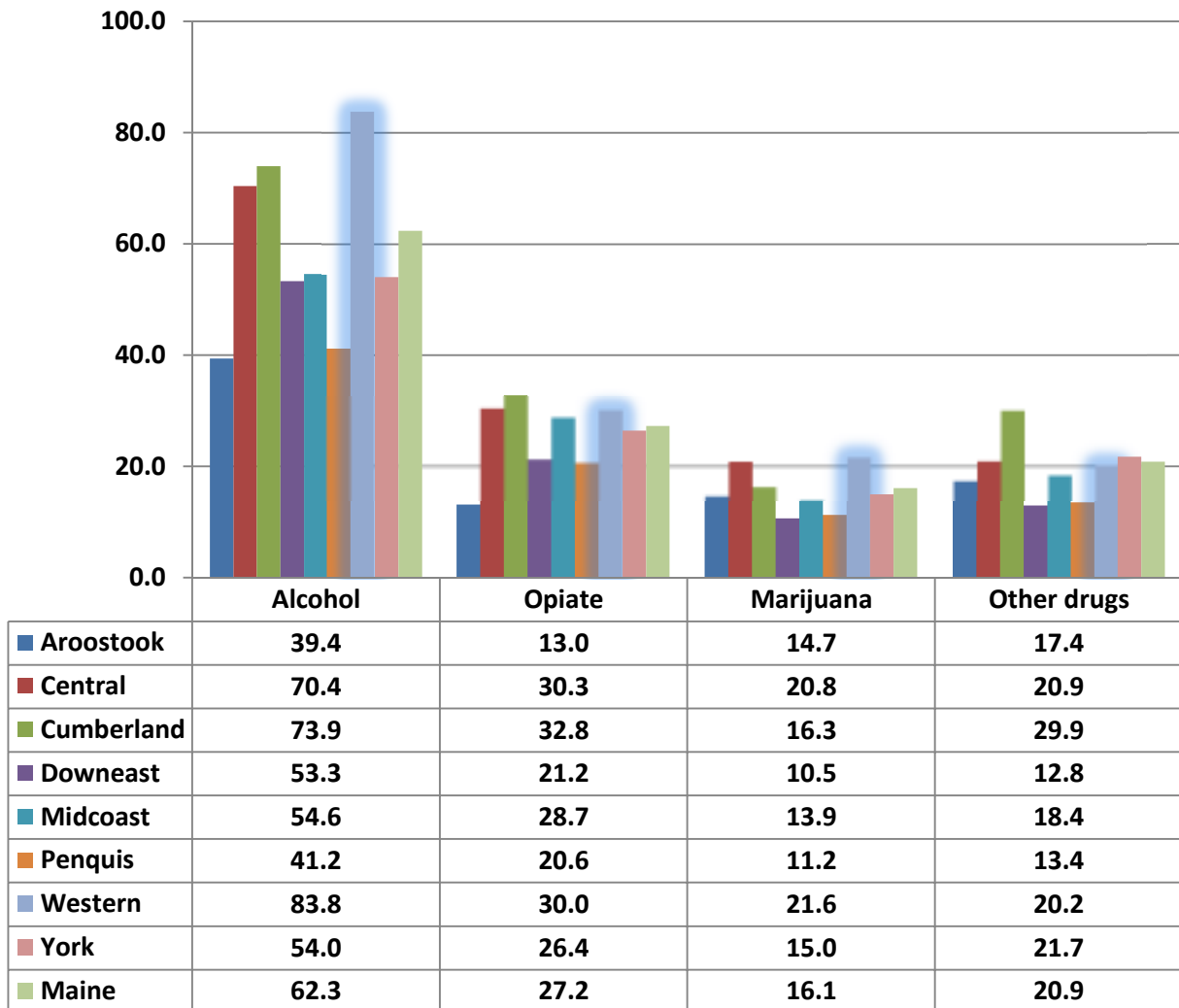
Source: MHDO
*Visits may involve multiple substances

Indicator Description: OUTPATIENT HOSPITAL VISITS RELATED TO SUBSTANCE USE. This indicator shows the number of outpatient hospital admissions (per 10,000 people) where alcohol, opiates, or other drugs was recorded as the primary diagnosis for which services were received. "Outpatient" refers to patients who receive treatment at a hospital or clinic but are not admitted overnight. The substance for which treatment was received was identified through hospital codes (ICD-9 codes) and includes those related to alcohol psychoactive substances (303-305). The rate per 10,000 allows us to see frequency with which an occurrence shows up within a population over time, as well as make relative comparisons between small and large population areas.

Operationalized as: $\left(\frac{\# \ of \ outpatient \ hospitalizations}{population} \right) \times 10,000$

Why Indicator is Important: Outpatient hospital visits related to substance use are an indication of injury sustained through substance use and the impact it has on the healthcare system.

Data Source(s): MHDO, 2010 and 2011

Summary: From 2010 to 2011, the outpatient admission rate due to substance use in Western PHD increased slightly from 524.8 admissions per 10,000 residents to 557.1 admissions per 10,000 residents. In 2011, Western PHD had a higher rate than that of the state (708.7 admissions per 10,000) and held the third lowest rate among public health districts.

Figure 25. Outpatient hospital admissions (per 10,000 people) related to substance use*, by Public Health District: 2010, 2011

District	2010	2011
Aroostook	340.3	284.6
Central	627.7	751.2
Cumberland	1,068.5	1,094.6
Downeast	973.3	681.6
Midcoast	349.8	389.3
Penquis	984.3	716.5
Western	524.8	557.1
York	587.0	667.0
Maine	722.1	708.7
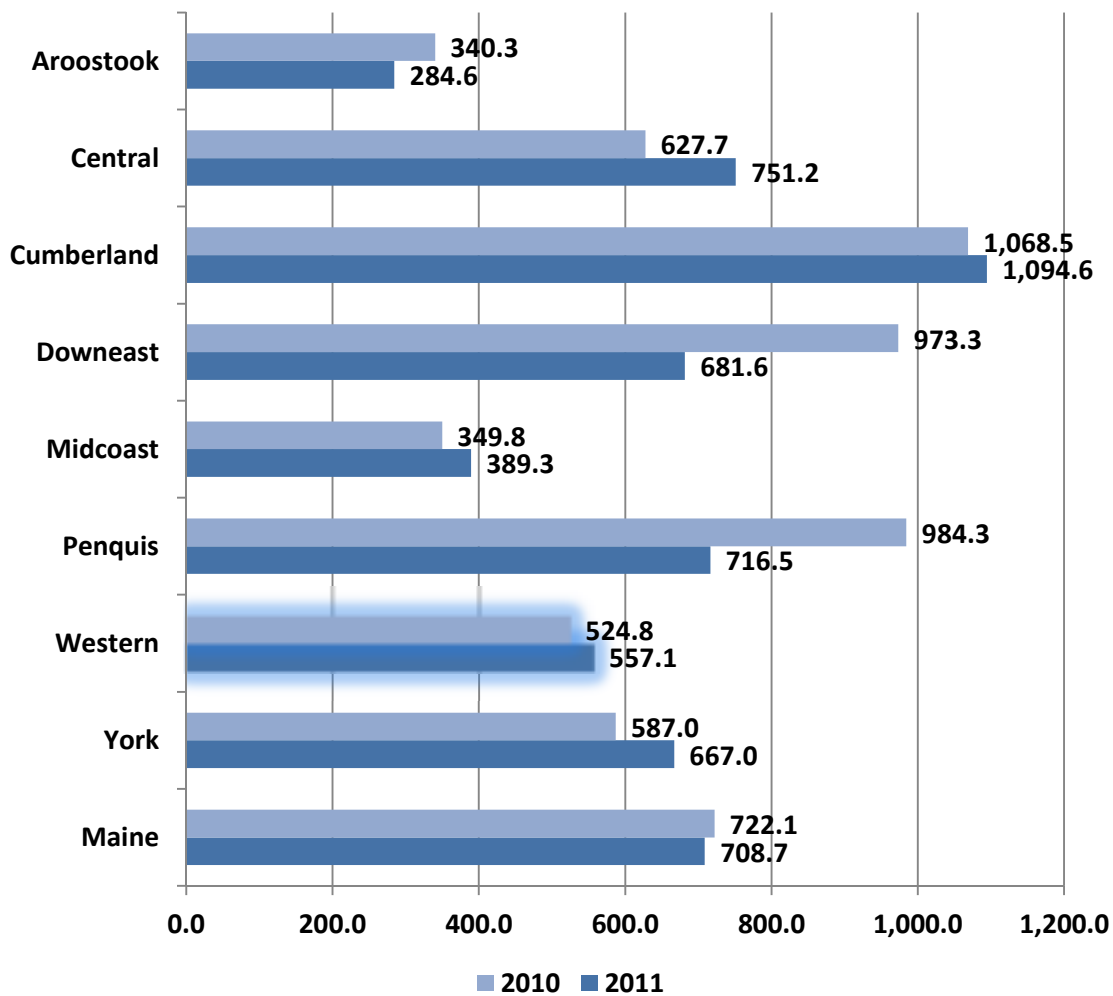
Source: MHDO

*Visits may involve multiple substances

Summary: In 2011, Western PHD had the fourth highest alcohol-related outpatient admission rate among public health districts (247.9 admissions per 10,000); this was lower than the statewide rate (291.1 admissions per 10,000). Western PHD also held the some of the lowest inpatient rates due to opiates (193.9 per 10,000) and marijuana (38.2 per 10,000).

Figure 26. Outpatient hospital admissions (per 10,000 people) related to substance use*, by Public Health District and drug type: 2011

	Alcohol	Opiate**	Marijuana	Other drugs
Aroostook	154.9	48.2	28.2	82.2
Central	185.8	407.9	41.2	162.9
Cumberland	559.9	359.0	126.4	304.8
Downeast	176.9	434.7	32.3	90.6
Midcoast	153.1	167.8	26.3	81.3
Penquis	224.9	382.3	57.8	132.2
Western	247.9	193.9	38.2	131.2
York	302.1	288.0	65.9	130.5
Maine	291.1	300.4	61.8	161.4
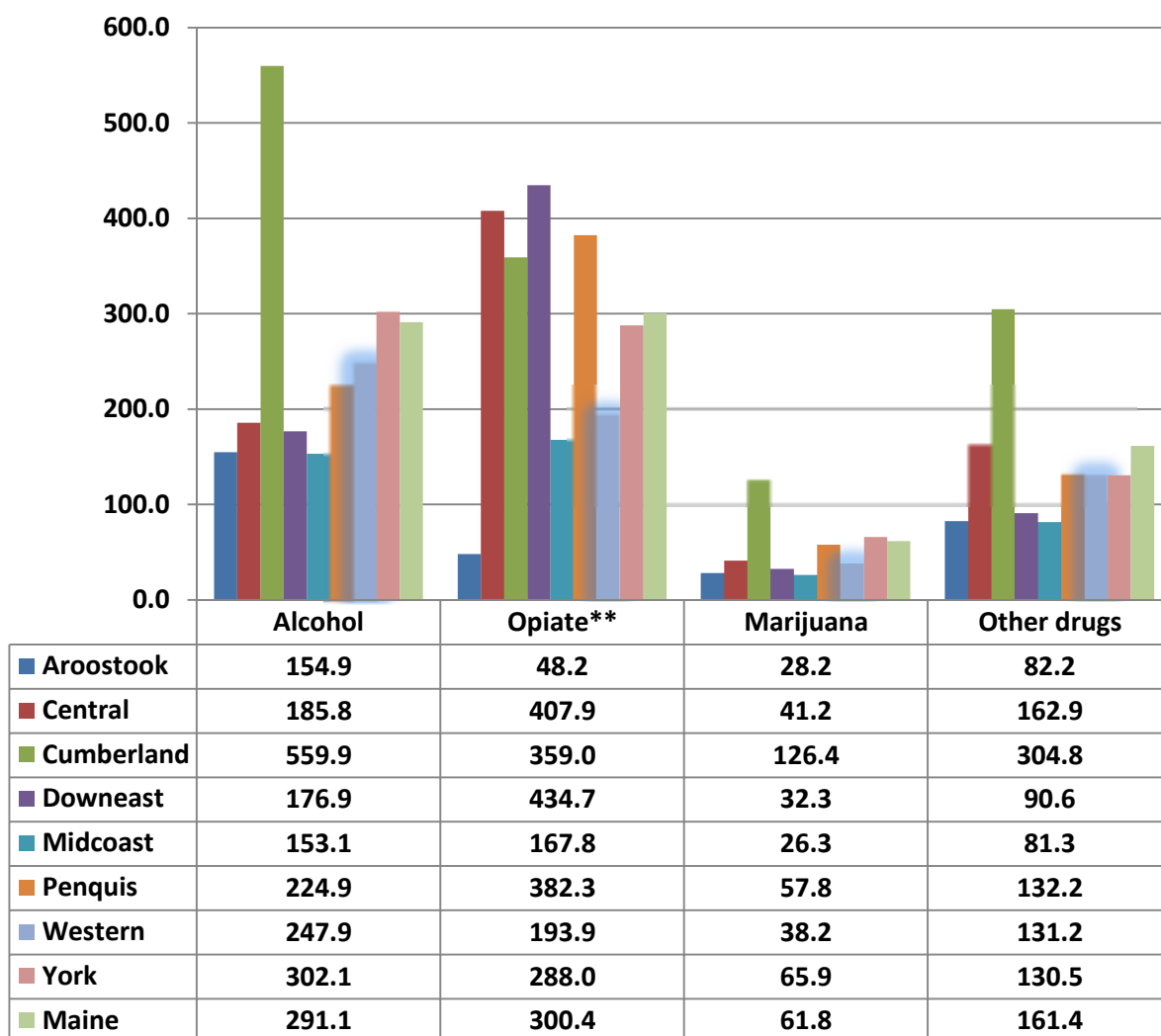
Source: MHDO
*Visits may involve multiple substances
**Includes prescription narcotics, methadone, and heroin.

Overdoses and Related Deaths

Indicator Description: OVERDOSES. This indicator shows the number of persons receiving help from Emergency Medical Services (EMS) related to an overdose in 2011 and 2012.

Why Indicator is Important: Overdosing on a substance can cause serious physical harm resulting in hospitalization and even death. Responding to overdoses also uses valuable EMS resources. The rate per 10,000 allows us to see the frequency with which an occurrence happens within a population over time, as well as make relative comparisons between small and large population areas. In this case, the base of 10,000 people was used due to small numbers.

Operationalized as: $\left(\frac{\# \ of \ overdose \ deaths}{population}\right) \times 10,000$

Data Source(s): Emergency Medical Services, 2011-2012

Summary: From 2011 to 2012, the Western PHD EMS overdose rate decreased from 18.2 overdoses per 10,000 residents to 13.4 overdoses per 10,000 residents. In 2012, Western PHD's EMS overdose rate was much lower than the state (40.5 per 10,000) and was the lowest among public health districts. When examined by primary type of substance involved, alcohol had the highest rate with 20.5 overdoses per 10,000 residents in Western PHD followed by medication with 21.2 overdoses per 10,000 residents.

Figure 27. Number of overdoses per 10,000 residents, by Public Health District: 2011 and 2012

District	2011	2012
Aroostook	23.8	27.4
Central	29.8	46.1
Cumber.	23.0	57.6
Downeast	30.2	31.9
Midcoast	30.8	36.2
Penquis	29.0	35.8
Western	18.2	13.4
York	38.6	40.1
Maine	27.7	40.5

■ 2011 ■ 2012
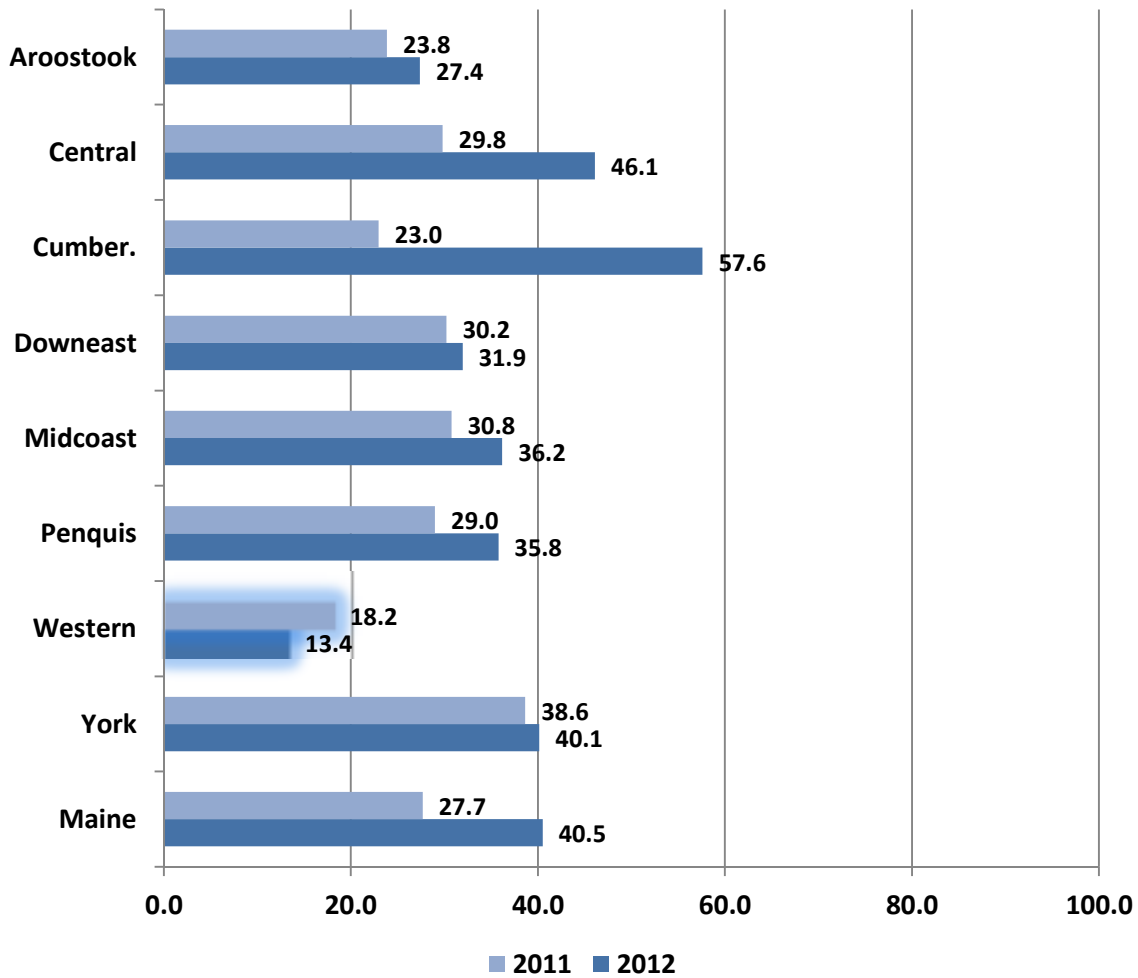
Source: Emergency Medical Services, 2011 and 2012

Figure 28. Number of overdoses per 10,000 residents, by Public Health District and primary type of substance involved: 2012
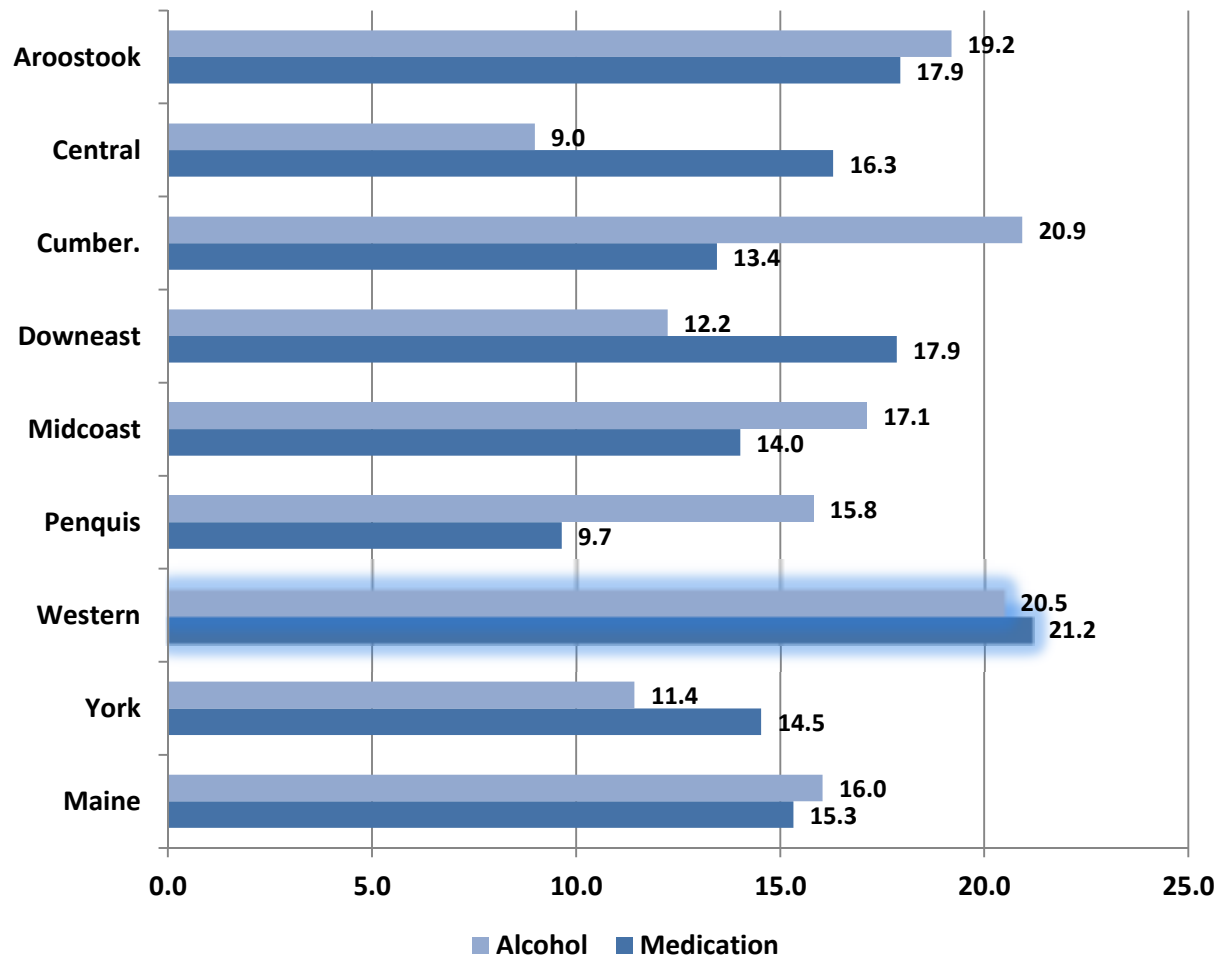
Source: Emergency Medical Services, 2012

Indicator Description: DEATHS DUE TO OVERDOSE. This measure reflects the number of deaths where the cause of death was directly related to the consumption of one or more substances. The measure excludes deaths where a substance may have been ingested prior to engaging in a behavior that resulted in death (e.g., drunk driving) or where lifetime substance use and abuse may have impacted health (e.g., cirrhosis). In order to preserve anonymity and strengthen validity, rates were calculated based on the sum of deaths per three year intervals. The rate per 100,000 allows us to see the frequency with which an occurrence happens within a population over time, as well as make relative comparisons between small and large population areas. In this case, the base of 100,000 people was used due to small numbers.

Operationalized as: $\left(\frac{\# \ of \ overdose \ deaths}{population}\right) \times 100,000$

Why Indicator is Important: One of the most extreme consequences of alcohol and drug abuse is overdose death; that is, the substance(s) consumed played a direct role in an individual's death. These are seen as potentially preventable deaths.

Data Source(s): Office of Chief Medical Examiner, 2000-02 to 2009-11.

Summary: Between years 2009 and 2011, the drug overdose death rate in Western PHD was 34.7 per 100,000; this rate has been increasing steadily and almost doubled since the period of 2000-02. Western PHD had a lower drug overdose death rate for the period of 2009-11 than the state (37.6 per 10,000) and held the third lowest rate among public health districts.

Figure 29. Drug-related death rate per 100,000, by Public Health District: 2000-02 to 2009-11

	2000-02	2003-05	2006-08	2009-11
Aroostook	8.2	23.5	20.9	28.0
Central	18.3	42.1	36.5	39.7
Cumber.	42.2	47.4	41.4	40.0
Downeast	16.4	40.7	44.3	40.1
Midcoast	18.9	32.6	28.6	28.4
Penquis	27.5	42.0	49.9	45.5
Western	18.9	31.7	32.1	34.7
York	21.0	28.9	32.7	37.8
Maine	24.3	37.4	36.8	37.6
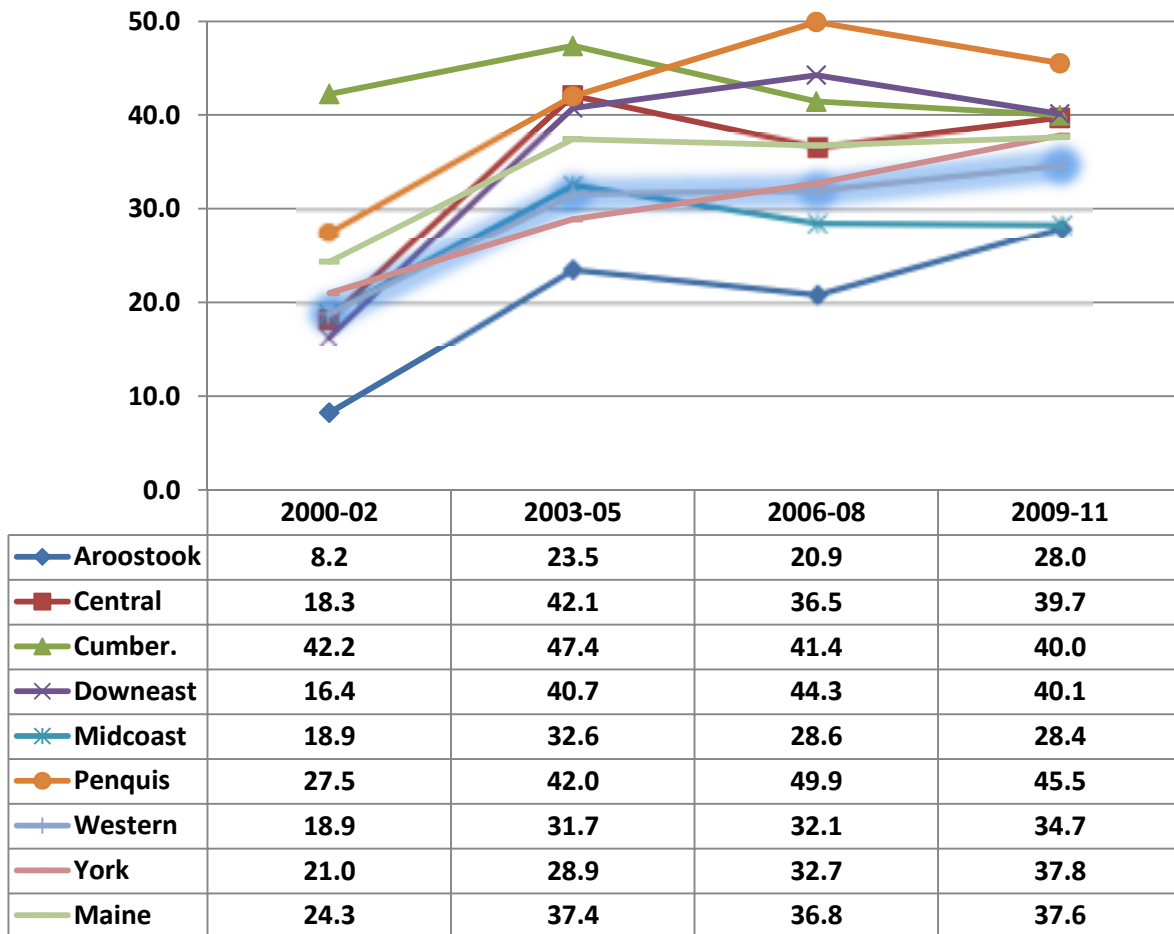
Source: Office of the Chief Medical Examiner.

Factors Contributing to Substance Use and Abuse

A body of substance abuse prevention research has identified certain groups of factors that "cause" or have an impact on substance use and the consequences related to use. That is, they appear to influence the occurrence and magnitude of substance use and its related consequences. Generically, these causal factors (also known as contributing factors) are categorized into groups which include:

- Social Access (e.g., getting drugs and alcohol from friends or family)
- Retail Availability (e.g., retailer not carding properly)
- Pricing & Promotion (e.g., two-for-one specials, industry sponsorships or signage)
- Social/Community Norms (e.g., parental/community attitudes and beliefs)
- Enforcement (e.g., lack of compliance checks)
- Perceptions of Harm (e.g., individuals' belief that using a substance is harmful)[3]
- Perceived Risk of Being Caught (e.g., individuals' belief that s/he will be caught by parents or police)[4]

Substance abuse prevention in Maine is undertaken with the assumption that making changes to these factors at the community level will result in changing behaviors around substance use and related problems. It is through positively impacting these factors that Maine can achieve population-level changes in substance consumption and consequences.

The rate of dispensed quantity of narcotics has consistently been higher in Western PHD than the state while the rates of dispensed quantity of stimulants and tranquilizers have been the lowest among public health districts.

Although the majority of high school students in Western PHD seem to perceive that regular use of substances poses a risk of harm, fewer than half think they will be caught by their parents and even fewer think they will be caught by the police if they use alcohol or marijuana. In fact, most students in Western PHD think it is easy to obtain alcohol and marijuana. Among age groups within the Western PHD, 18 to 25 year olds reported to have the lowest perception of risk from binge drinking.

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[3] Bonnie, Richard J., and Mary Ellen O'Connell, Eds. (2004). *Reducing Underage Drinking: A Collective Responsibility.* The National Academies Press: Washington, DC.
[4] *"A General Causal Model to Guide Alcohol, Tobacco and Illicit Drug Prevention: Assessing the Research Evidence."* Multi-State Technical Assistance Workshop. Washington, DC. March 16, 2006.

Indicator Description: **PERCEIVED EASE OF OBTAINING ALCOHOL BY UNDERAGE YOUTH.** This indicator reflects the percentage of high school students (grades 9 to 12) who reported that it would be easy or very easy for them to get alcohol if they wanted some.

Why Indicator is Important: According to the 2011 statewide MIYHS, students who reported that they thought alcohol was easy to obtain were three times as likely to report consuming alcohol within the past month compared to students who did not think it was easy obtain.

Data Source(s): MIYHS, 2009-2011.

Summary: Sixty-five percent of high school students in Western PHD indicated that it was easy to get alcohol. This was slightly lower than the statewide rate of 67 percent.

Figure 30. Percent of high school students in Western PHD who reported it was easy to get alcohol: 2009, 2011
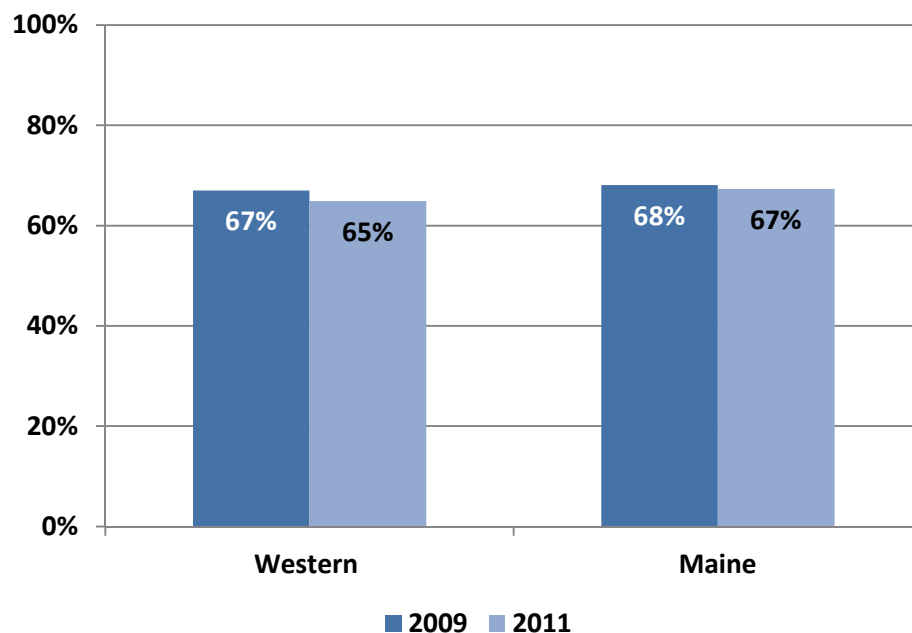
Source: MIYHS

Indicator Description: PERCEIVED EASE OF OBTAINING MARIJUANA BY YOUTH. This indicator illustrates the percentage of high school students reporting it would be easy or very easy to obtain marijuana if they wanted it.

Why Indicator is Important: According to the 2011 statewide MIYHS, students who reported that they thought marijuana was easy to obtain were seven times as likely to use marijuana in the past 30 days compared to their peers who thought it was difficult to obtain.

Data Source(s): MIYHS, 2009-2011.

Summary: In 2011, 58 percent of high school students in Western PHD indicated that it would be easy to get marijuana. This was the same as the statewide average.

Figure 31. Percent of high school students in Western PHD who reported it would be easy to get marijuana: 2009, 2011
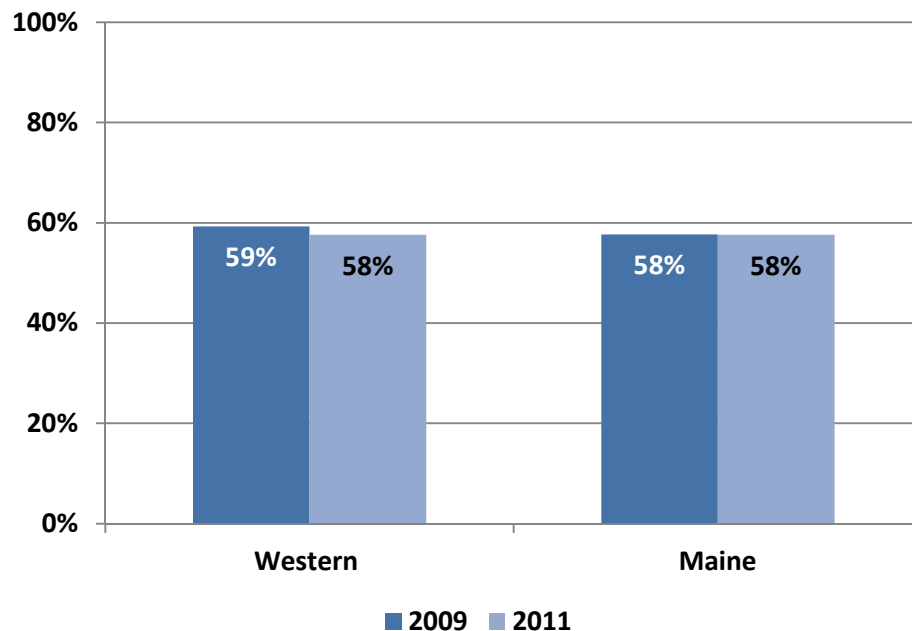
Source: MIYHS

Indicator Description: NUMBER OF ALCOHOL OUTLETS PER CAPITA. This indicator reflects the number of active (as of May 2013) retail establishments selling alcohol per person. This includes both on-premise (e.g., bars, restaurants) and off-premise (e.g., convenience stores) establishments. It is calculated by dividing the number of active retail establishments by the number of residents in the county (based on 2012 U.S. Census estimates).

Why Indicator is Important: National research shows that there is a correlation between the number of places that sell alcohol in an area (retail density) and the rate of alcohol-related crime.[5]

Data Source(s): DPS, Liquor Licensing and Compliance, 2013; U.S. Census, 2010.

Summary: The number of active liquor licensees in Western PHD per 1,000 residents (2.1) was slightly lower than the statewide average in 2013 (3.1).

Figure 32. Number of liquor licensees per 1,000 residents, by Public Health District: 2013
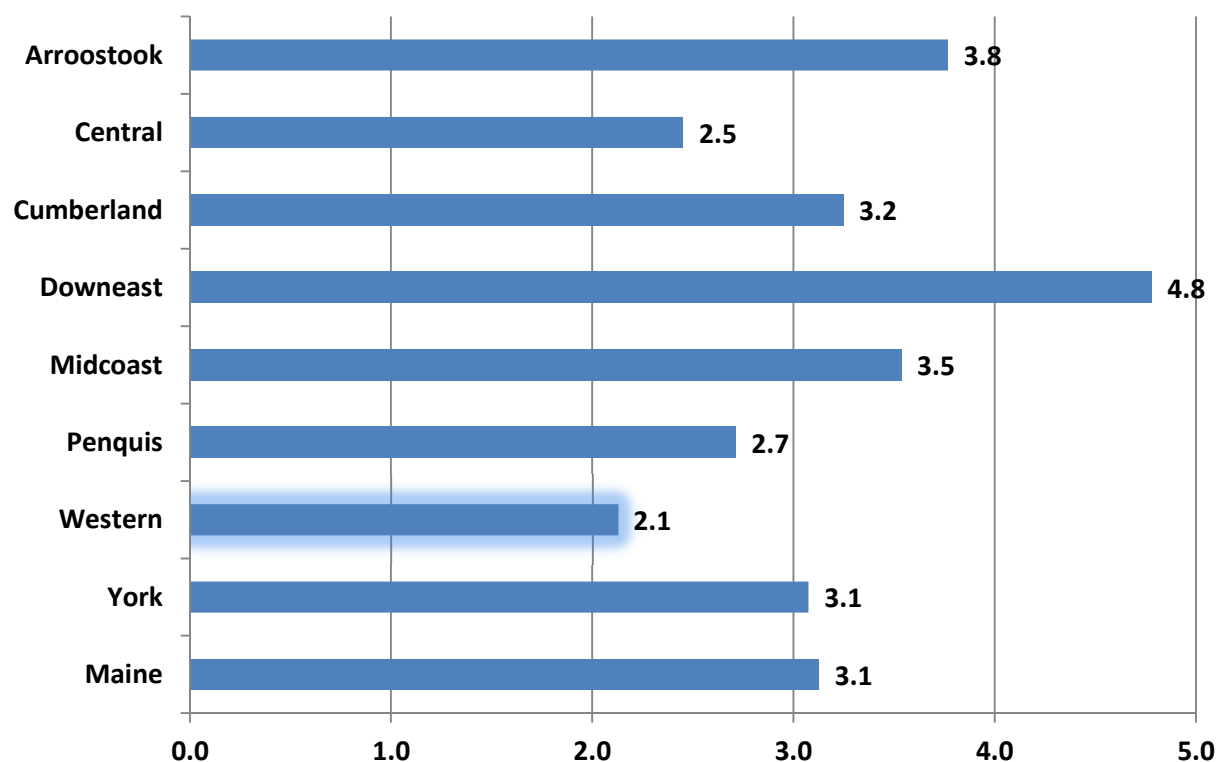
Source: DPS and U.S. Census

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[5]Grube, J. W., Gruenewald, P. J. & Chen, M. J. (2010). Community alcohol outlet density and underage drinking. *Addiction*, 105, 270-278.

Indicator Description: **DISPENSED QUANTITY OF SCHEDULE II DRUGS PER CAPITA.** These indicators reflect the dispensed quantity of narcotics, tranquilizers, and stimulants through prescriptions in Maine. This includes only prescription drugs that are classified "Schedule II" drugs, meaning those with a high potential for abuse. It is important to note that the dispensed quantity does not indicate the size or dosage of the pills associated with the prescription. All pharmacies in Maine report to the Prescription Monitoring Program.

Why Indicator is Important: The dispensed quantity per capita indicates the volume of prescription drugs potentially available in the community for diversion (e.g., gift, sale, or theft). A higher level of availability contributes to misuse by individuals without a prescription.

Data Source(s): PMP, 2008-2012

Summary: In 2012, the quantity of narcotics per capita in Western PHD was 64.9; this rate was higher than the statewide rate (59.7 per person) and has remained relatively stable since 2008.

Figure 33. Dispensed quantity of narcotics per capita, by Public Health District: 2008-2012

	2008	2009	2010	2011	2012
Aroostook	69.0	65.4	62.9	56.7	52.8
Central	85.8	72.9	74.2	73.8	71.9
Cumber.	54.5	48.4	49.0	47.7	45.5
Downeast	77.4	72.5	69.8	69.4	63.6
Midcoast	71.3	66.0	67.5	67.6	65.0
Penquis	88.9	72.6	70.0	68.8	67.5
Western	61.1	64.6	67.5	68.2	64.9
York	63.5	54.1	57.3	58.5	54.6
Maine	69.4	62.4	63.2	62.6	59.7
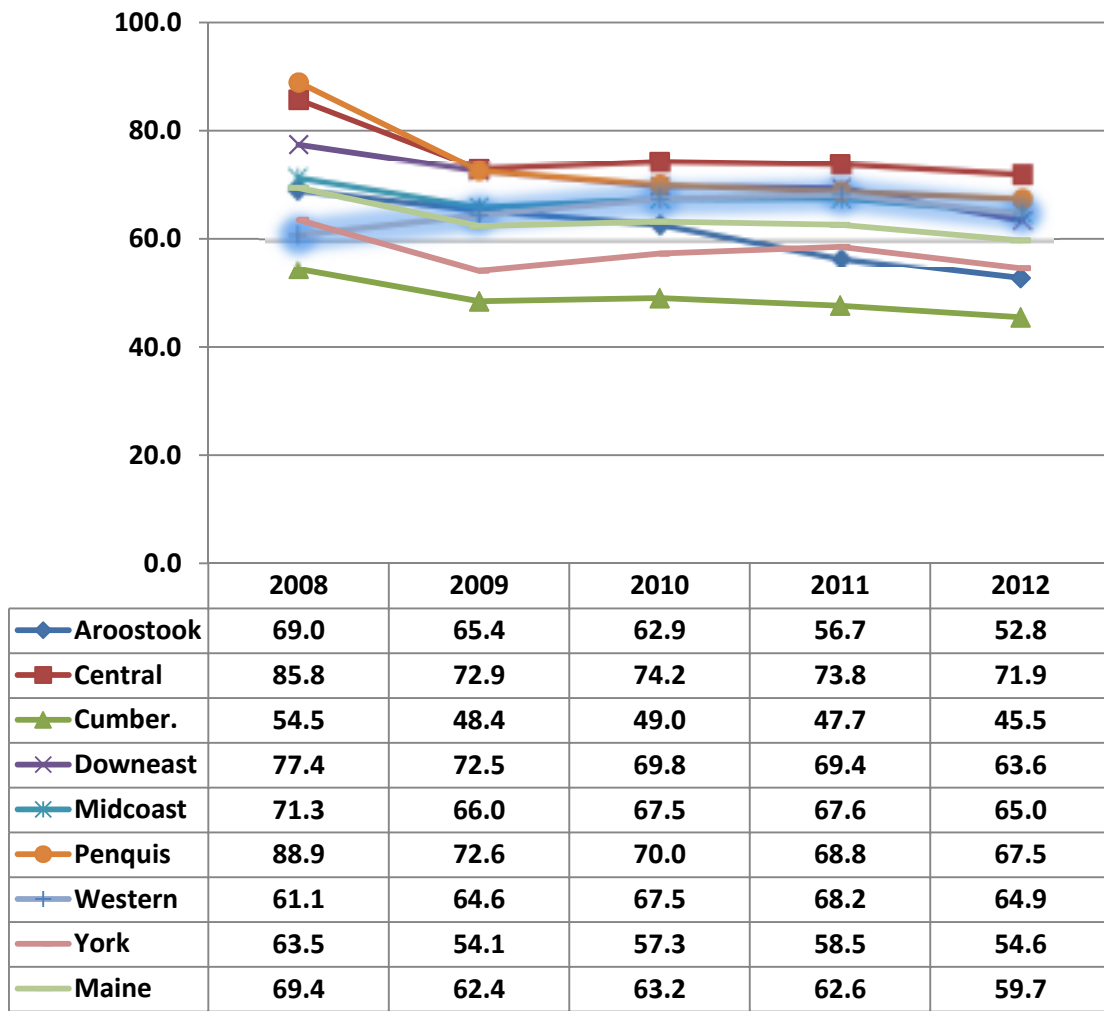
Source: PMP, 2006-2012

Summary: The dispensed quantity of stimulants per capita in Western PHD has steadily increased from 6.8 per person in 2008 to 9.3 per person in 2012. Western PHD has consistently held the lowest rate for dispensed quantities of stimulants among public health districts since 2008.

Figure 34. Dispensed quantity of stimulants per capita, by Public Health District: 2008-2012

	2008	2009	2010	2011	2012
Aroostook	8.5	8.8	9.1	9.9	9.8
Central	8.0	8.8	9.3	10.5	11.1
Cumber.	10.6	11.6	12.9	13.9	14.0
Downeast	9.1	9.4	9.8	10.9	11.7
Midcoast	8.4	9.4	10.6	12.1	12.6
Penquis	12.1	13.4	13.8	15.1	16.5
Western	6.8	7.9	8.5	9.3	9.3
York	8.7	9.6	11.0	12.2	12.5
Maine	9.1	10.1	11.0	12.1	12.5
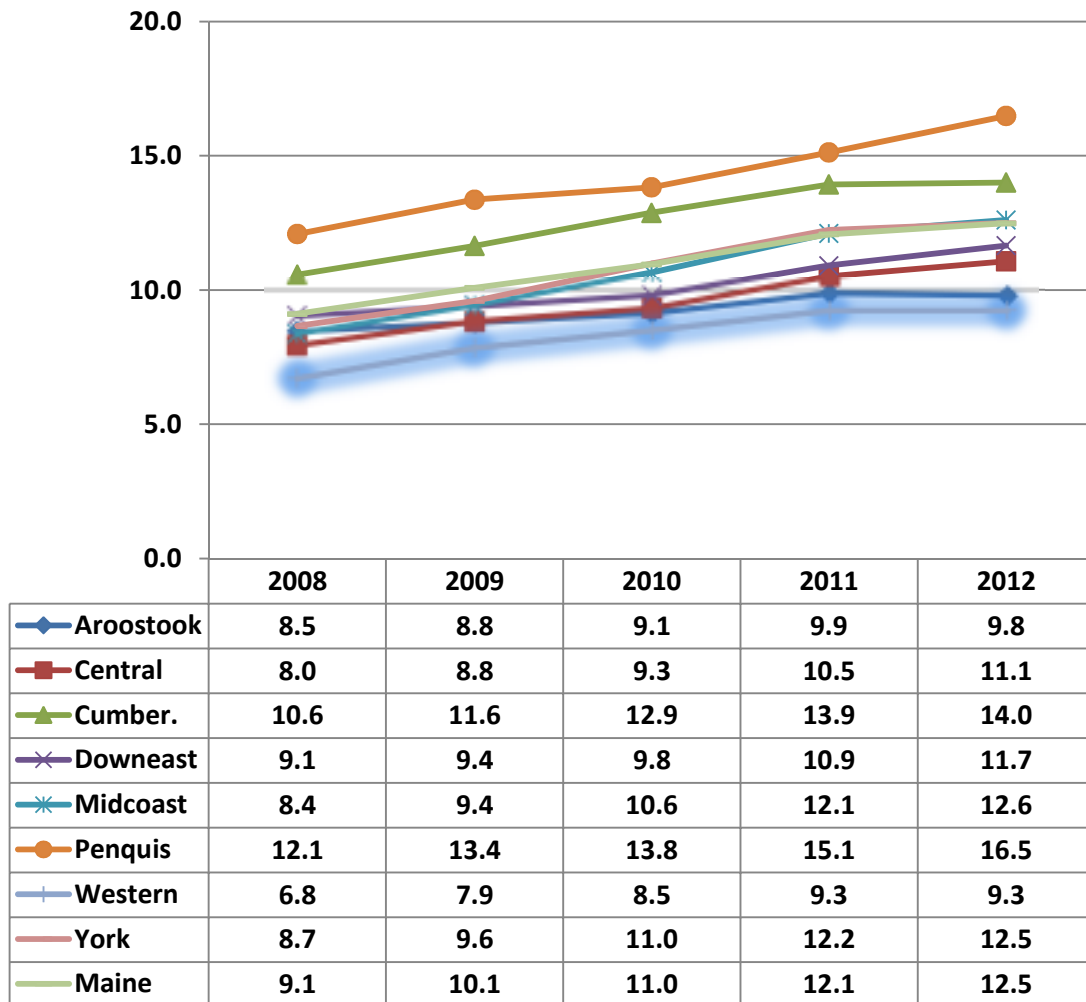
Source: PMP, 2008-2012

Summary: The dispensed quantity of tranquilizers per capita in Western PHD increased slightly from 21.3 in 2008 to 23.2 in 2012. Most public health districts' rates, including Western PHD, have remained relatively stable over the past several years.

Figure 35. Dispensed quantity of tranquilizers per capita, by Public Health District: 2008-2012
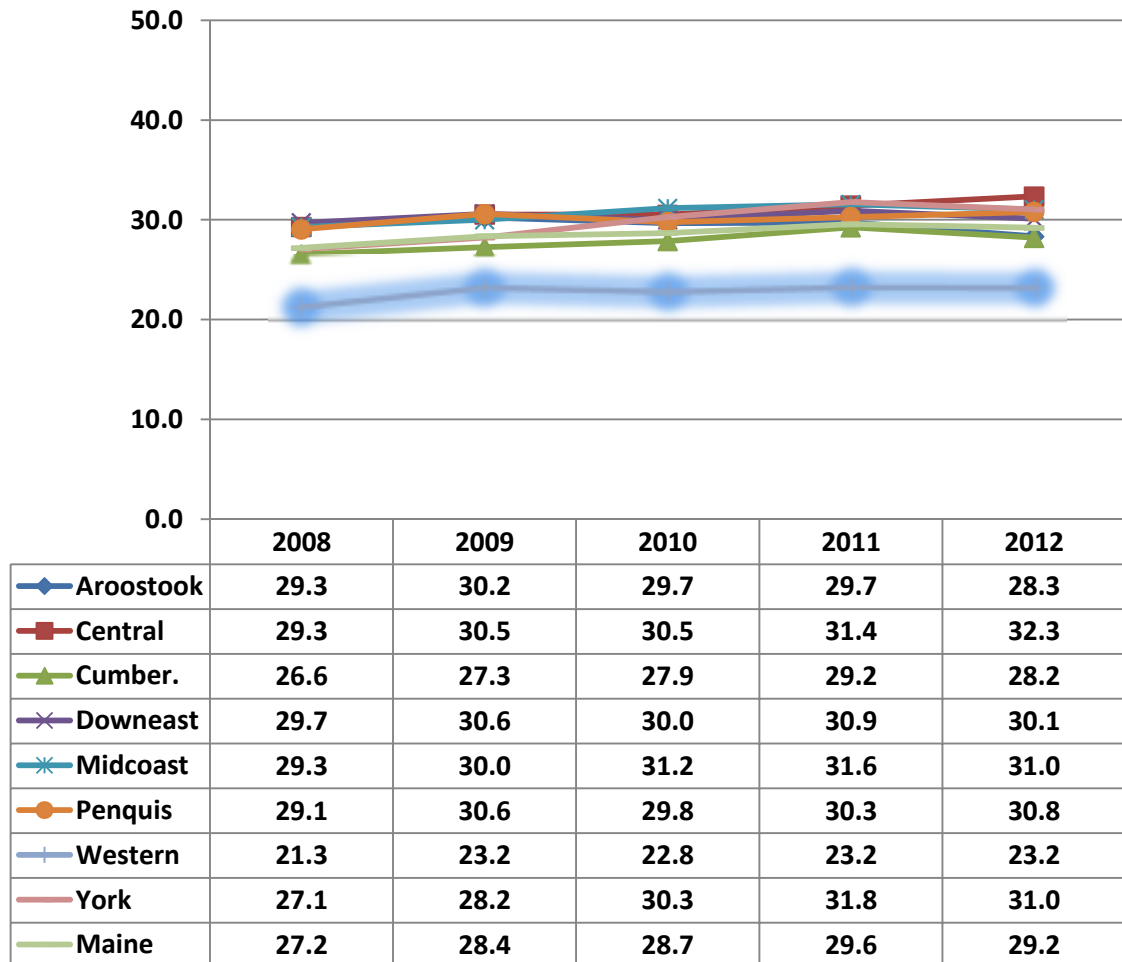
	2008	2009	2010	2011	2012
Aroostook	29.3	30.2	29.7	29.7	28.3
Central	29.3	30.5	30.5	31.4	32.3
Cumber.	26.6	27.3	27.9	29.2	28.2
Downeast	29.7	30.6	30.0	30.9	30.1
Midcoast	29.3	30.0	31.2	31.6	31.0
Penquis	29.1	30.6	29.8	30.3	30.8
Western	21.3	23.2	22.8	23.2	23.2
York	27.1	28.2	30.3	31.8	31.0
Maine	27.2	28.4	28.7	29.6	29.2

Source: PMP, 2008-2012

Indicator Description: PERCEIVED RISK FROM BINGE DRINKING AMONG YOUTH. This indicator reflects the percentage of individuals who perceive that there is moderate-to-great risk from drinking five or more drinks once or twice per week.

Why Indicator is Important: According to the 2011 statewide MIYHS, high school students who perceive binge drinking as a moderate-to-great risk of harm are one-third as likely to binge drink in the past month than students who did not perceive harm. Adults are also less likely to binge drink if they perceive it to be risky.

Data Source(s): MIYHS, 2009-2011.

Summary: In 2011, 78 percent of high school students in Western PHD indicated that there is a moderate-to-great risk of people harming themselves if they consume five or more drinks regularly, a significant increase from 2009 (72%).

Figure 36. Percent of high school students in Western PHD who reported a risk of harm from consuming five or more drinks once or twice per week: 2009, 2011
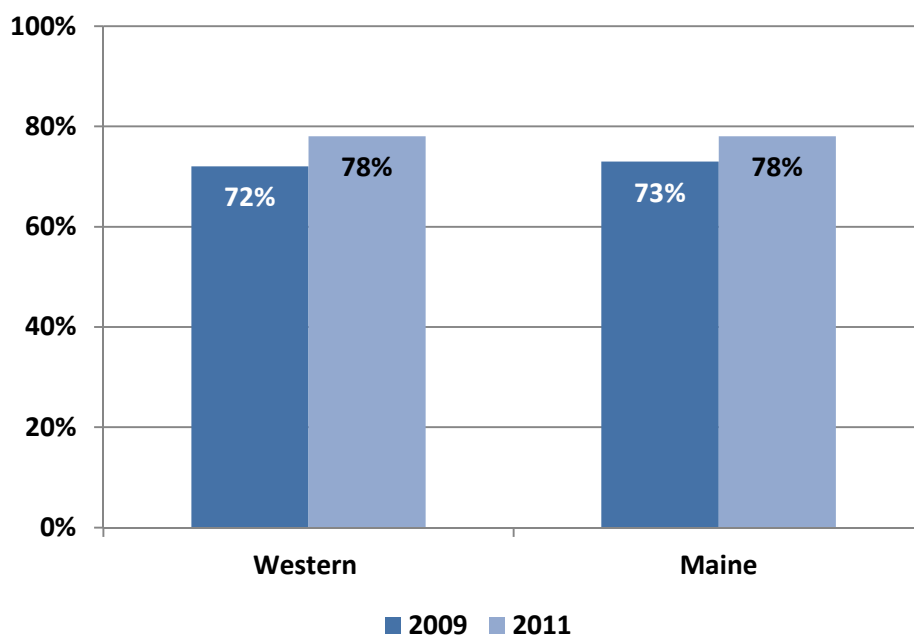
Source: MIYHS

Indicator Description: PERCEIVED RISK FROM BINGE DRINKING AMONG MAINERS. This indicator reflects the percentage of Mainers age 18 and older who perceive that there is risk from consuming five or more drinks once or twice per week. Because of small sample sizes, survey data from multiple years must be combined in order to produce this estimate.

Why Indicator is Important: The perception that consuming a lot of alcohol is risky indicates an individual is knowledgeable about health risks and other negative consequences. Adults are less likely to binge drink if they perceive it to be risky.

Data Source(s): NSDUH, 2006-08 and 2008-10.

Summary: During the period 2008-10, Western PHD residents ages 18-25 indicated the lowest perception of risk from binge drinking among age groups within the district with 27 percent, while those 26 and older had the highest proportion (39%). Western PHD's rates of perception are the same as the state. Although not shown, rates of perception of risk from binge drinking among Western PHD's residents 12 and older decreased slightly from 2006-08 (38%) to 2008-10 (37%).

Figure 37. Percent of population age 12 or older who perceive a great risk from binge drinking, by Public Health District: 2008-10
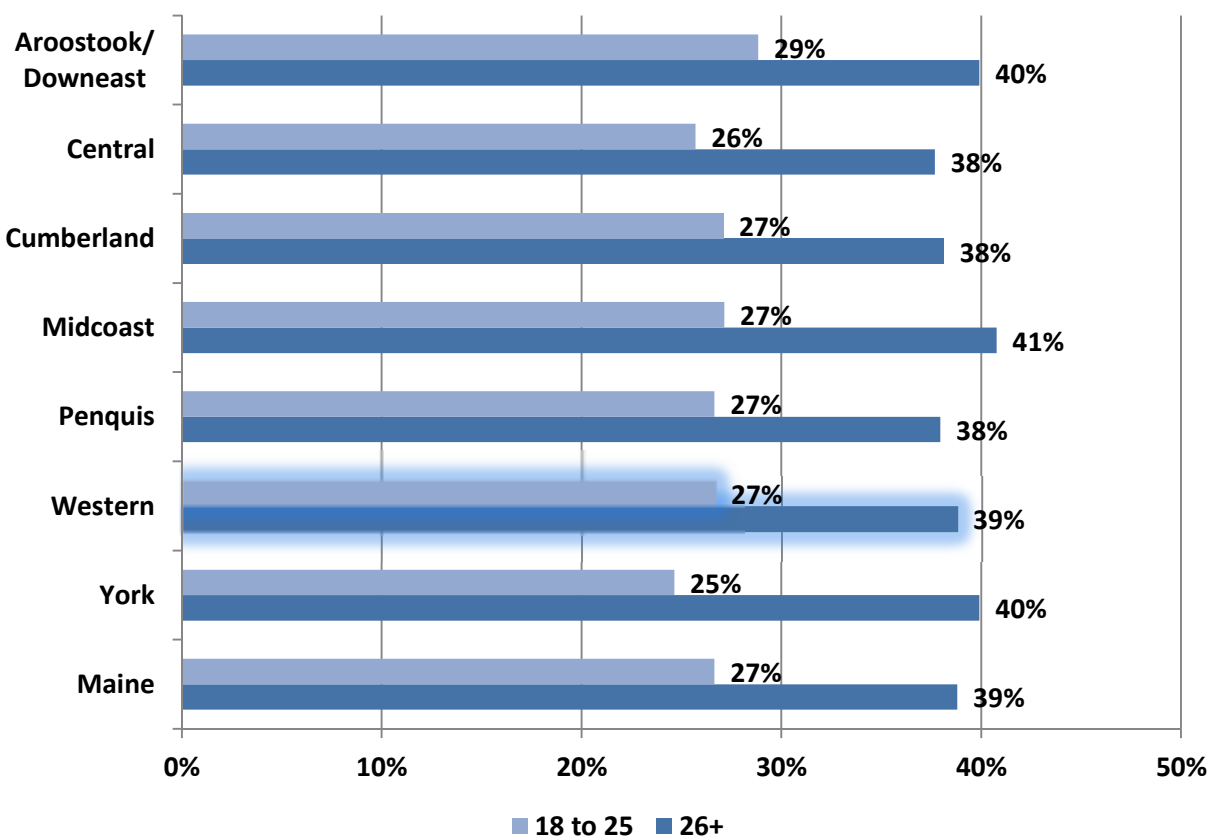
Source: NSDUH

Indicator Description: PERCEIVED RISK OF MARIJUANA USE AMONG YOUTH. This measure demonstrates the percentage of individuals who perceive a moderate-to-great risk of harm from smoking marijuana regularly.

Why Indicator is Important: According to the 2011 statewide MIYHS, high school students who do not believe there is moderate-to-great risk in smoking marijuana regularly are 6.5 times as likely to smoke marijuana as their peers who do perceive risk of harm.

Data Source(s): MIYHS, 2009-2011.

Summary: From 2009 to 2011, the percentage of high school students in Western PHD who indicated that there is a moderate-to-great risk of people harming themselves if they smoke marijuana regularly decreased from 60 percent to 55 percent. This was slightly lower than the statewide average.

Figure 38. Percent of high school students in Western PHD who reported a risk of harm from smoking marijuana regularly: 2009, 2011
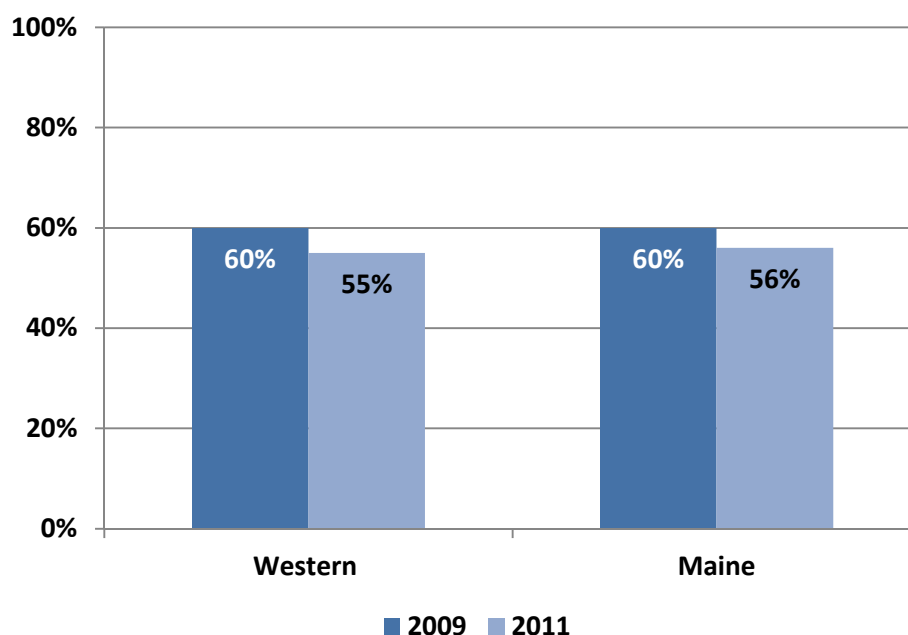
Source: MIYHS

Indicator Description: PERCEIVED RISK OF MARIJUANA USE AMONG MAINERS. This measure demonstrates the percentage of Mainers over the age of 12 who perceive a risk of harm from smoking marijuana once a month. Because of small sample sizes, survey data from multiple years must be combined in order to produce this estimate.

Why Indicator is Important: The perception that using a substance is risky indicates an individual is knowledgeable about health risks and other negative consequences associated with that substance. Perceptions of risk reduce the likelihood that an individual will engage in the behavior.

Data Source(s): NSDUH, 2006-08 and 2008-10.

Summary: From 2006-08 to 2008-10, the percentage of Western PHD residents 12 and older who perceived a great risk from smoking marijuana once a month decreased from 30 percent to 26 percent; this was lower than the statewide average (28%) and the second lowest among public health districts.

Figure 39. Percent of population age 12 or older who perceive a great risk from smoking marijuana once a month, by Public Health District: 2006-08 and 2008-10
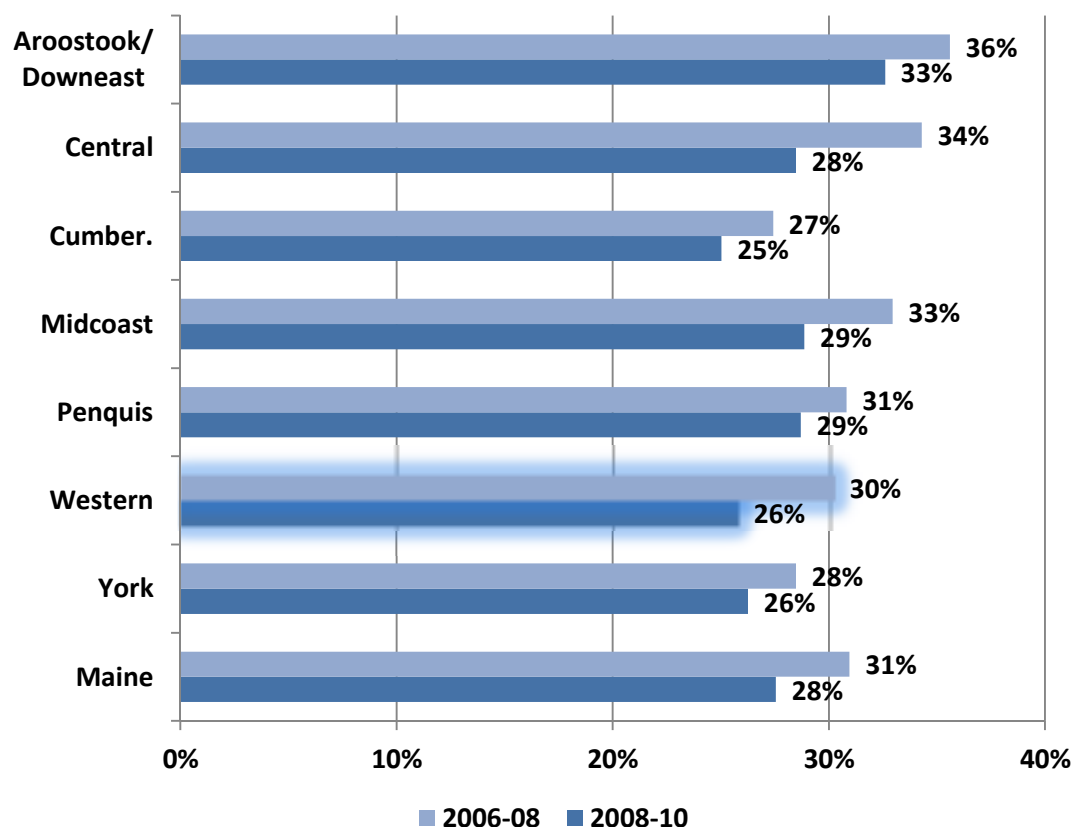

Source: NSDUH

Indicator Description: PERCEIVED RISK OF PRESCRIPTION DRUG MISUSE AMONG YOUTH. This measure demonstrates the percentage of individuals who perceive a moderate-to-great risk of harm from taking a prescription drug that was not prescribed to them.

Why Indicator is Important: According to the 2011 statewide MIYHS, high school students who do not believe there is moderate-to-great risk misusing prescription drugs are 4.6 times as likely to smoke marijuana as their peers who do perceive risk of harm.

Data Source(s): MIYHS, 2009-2011.

Summary: Perception of risk from misusing prescription drugs among high school students in Western PHD increased from 80 percent in 2009 to 84 percent in 2011, this was on par with the statewide average (85%). That means 16 percent of Western PHD high school students did not think misusing prescription drugs was risky.

Figure 40. Percent of high school students who reported a risk of harm from misusing prescription drugs, by Public Health District: 2009, 2011
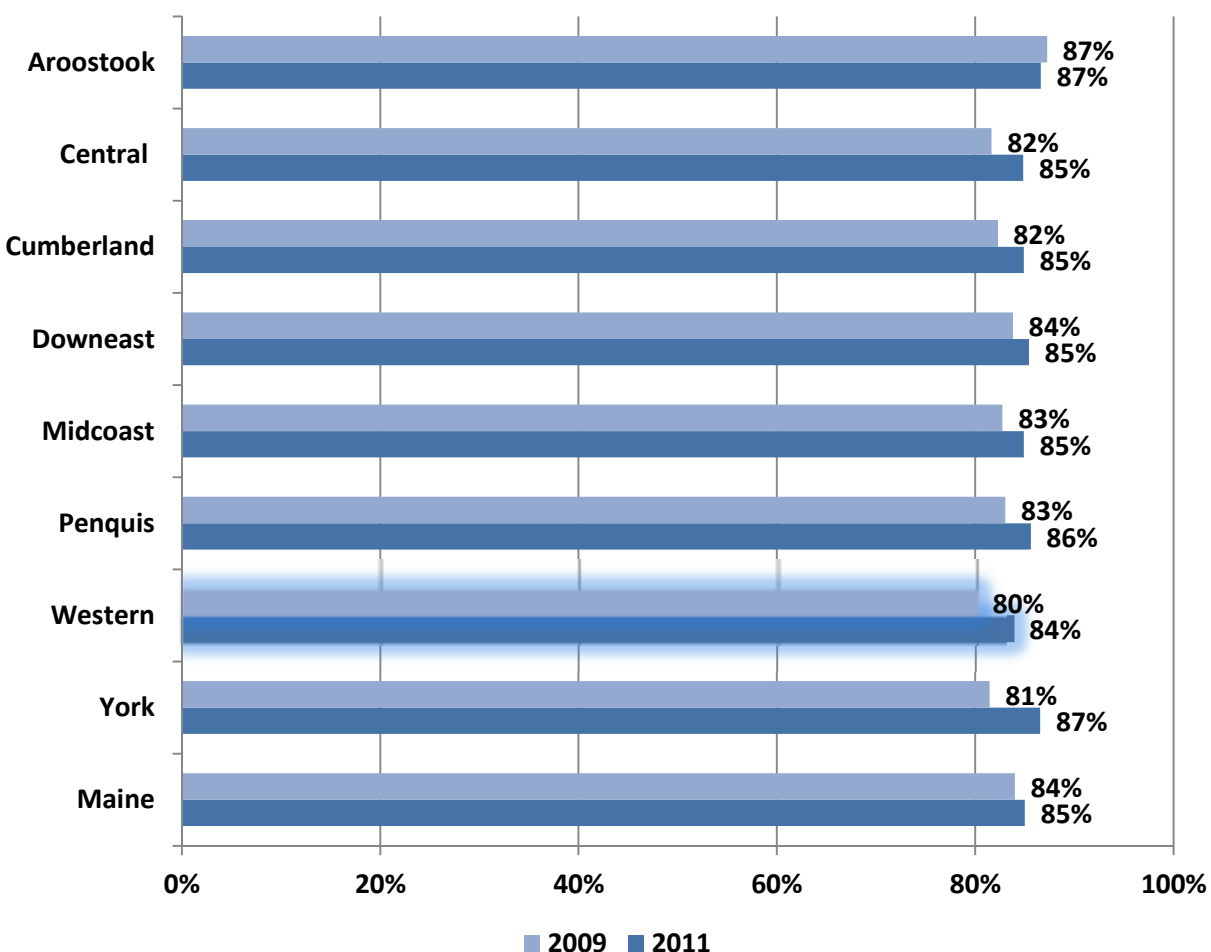
Source: MIYHS

Indicator Description: PERCIEVED RISK OF BEING CAUGHT FOR DRINKING ALCOHOL AMONG YOUTH. This indicator reflects the percentage of high school students who reported that they would be caught by their parents or by police if they drank alcohol.

Why Indicator is important: According to the 2011 statewide MIYHS, high school students who believe they will be caught by their parents are one-fifth as likely to drink in the past month as compared to students who do not think they will be caught. Students who believe that they would be caught by the police are half as likely to drink alcohol in the past month as those who do not think they would be caught.

Data Source(s): MIYHS, 2009-2011.

Summary: At forty-four percent, the perceived risk among high school students of being caught by their parents for drinking alcohol in Western PHD is approximately the same as the state average (43%). The percent of high school students who indicated they thought they would be caught by the police for drinking alcohol was 16 percent. That means high school students in Western PHD are almost three times more likely to perceive being caught by their parents (rather than by the police) for drinking alcohol.

Figure 41. Perceived risk among high school students in Western PHD of being caught by parents or police for drinking alcohol: 2009, 2011
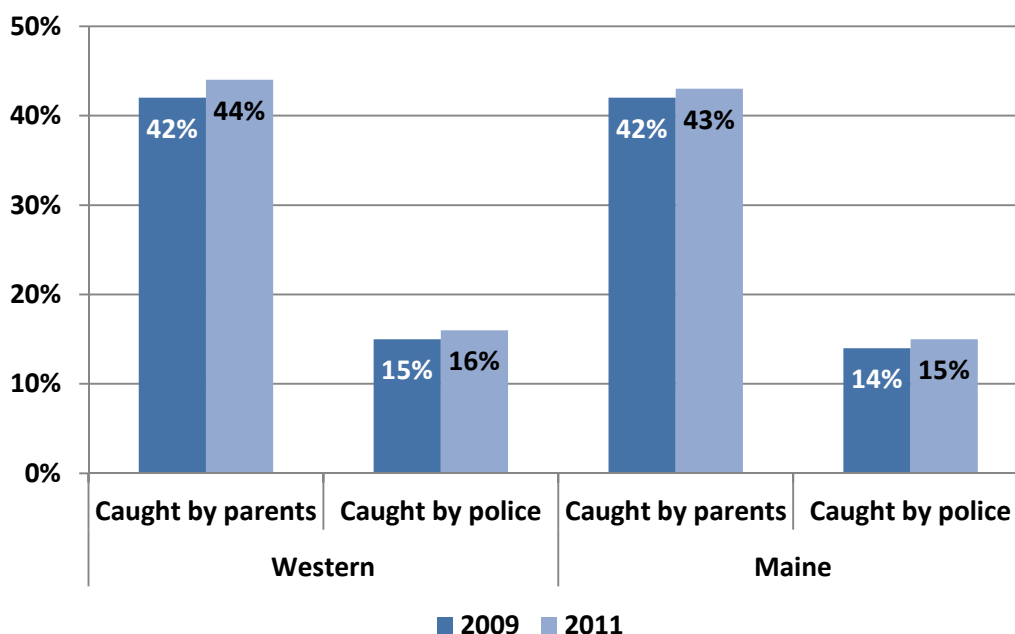
Source: MIYHS

Indicator Description: PERCEIVED RISK OF BEING CAUGHT FOR SMOKING MARIJUANA AMONG YOUTH. This measure shows the percentage of high school students who reported that they thought they would be caught by police if they smoked marijuana.

Why Indicator is Important: According to the statewide 2011 MIYHS, high school students who believe they would be caught by the police are approximately half as likely to smoke marijuana as their peers.

Data Source(s): MIYHS, 2009, 2011.

Summary: In 2011, 23 percent of high school students in Western PHD indicated that they thought they would be caught by the police if they smoked marijuana, compared to 25 percent statewide.

Figure 42. Perceived risk among high school students in Western PHD of being caught by police for smoking marijuana: 2009, 2011
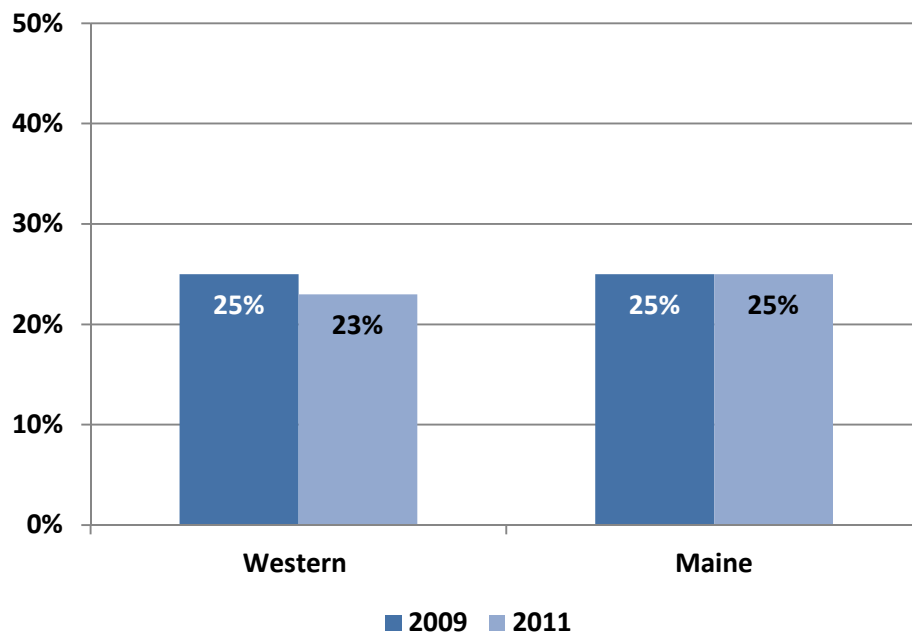

Source: MIYHS

Mental Health, Suicide and Co-occurring Disorders

The relationship between substance use and mental health has been well documented. There are great efforts underway at the Substance Abuse Mental Health Services Administration (SAMHSA) and throughout Maine to better integrate mental health promotion and substance abuse prevention. At the individual level, it is important to know if one exists because the symptoms of each can affect the other; that is, a person who is depressed may abuse alcohol in an effort to feel better. At the community level, it is important to understand how the prevalence of one interacts with the other so that prevention and intervention efforts can better address the needs of both. The data indicators included below represent the first attempt to collect multiple mental health indicators that can be routinely monitored in relation to substance abuse in hopes that this will lead to better prevention and intervention.

One-fifth of adults in Western PHD reported having ever been diagnosed with an anxiety disorder and one quarter indicated being diagnosed with a depressive disorder in 2011. Furthermore, about one-quarter of high school students felt sad or hopeless every day for two weeks in 2011; 14 percent of high school students in Western Maine PHD reported having considered suicide. While the proportion of individuals from Western PHD admitted for substance abuse treatment who also have a mental health diagnosis has been increasing since 2007, this rate has consistently been lower than the Maine average.

Indicator Description: DIAGNOSIS OF ANXIETY AND DEPRESSION AMONG ADULTS. This indicator examines the percentage of Maine residents age 18 and older who have ever been told by a doctor that they have a depressive or anxiety disorder.

Why Indicator is Important: The link between mental health and substance abuse is well documented. Experiencing anxiety or depression is associated with higher rates of substance abuse.

Data Source(s): BRFSS, 2011.

Summary: In 2011, one fifth of adults in Western PHD had been told they have an anxiety disorder, and one quarter had been told they have a depressive disorder; these rates were on par with those statewide.

Figure 43. Percent of adults who have ever been told they have an anxiety or depressive disorder, by Public Health District: 2011

District	Anxiety	Depression
Aroostook	18%	24%
Central	23%	26%
Cumber.	18%	23%
Downeast	18%	23%
Midcoast	19%	24%
Penquis	23%	27%
Western	20%	25%
York	20%	22%
Maine	20%	24%

■ Anxiety ■ Depression
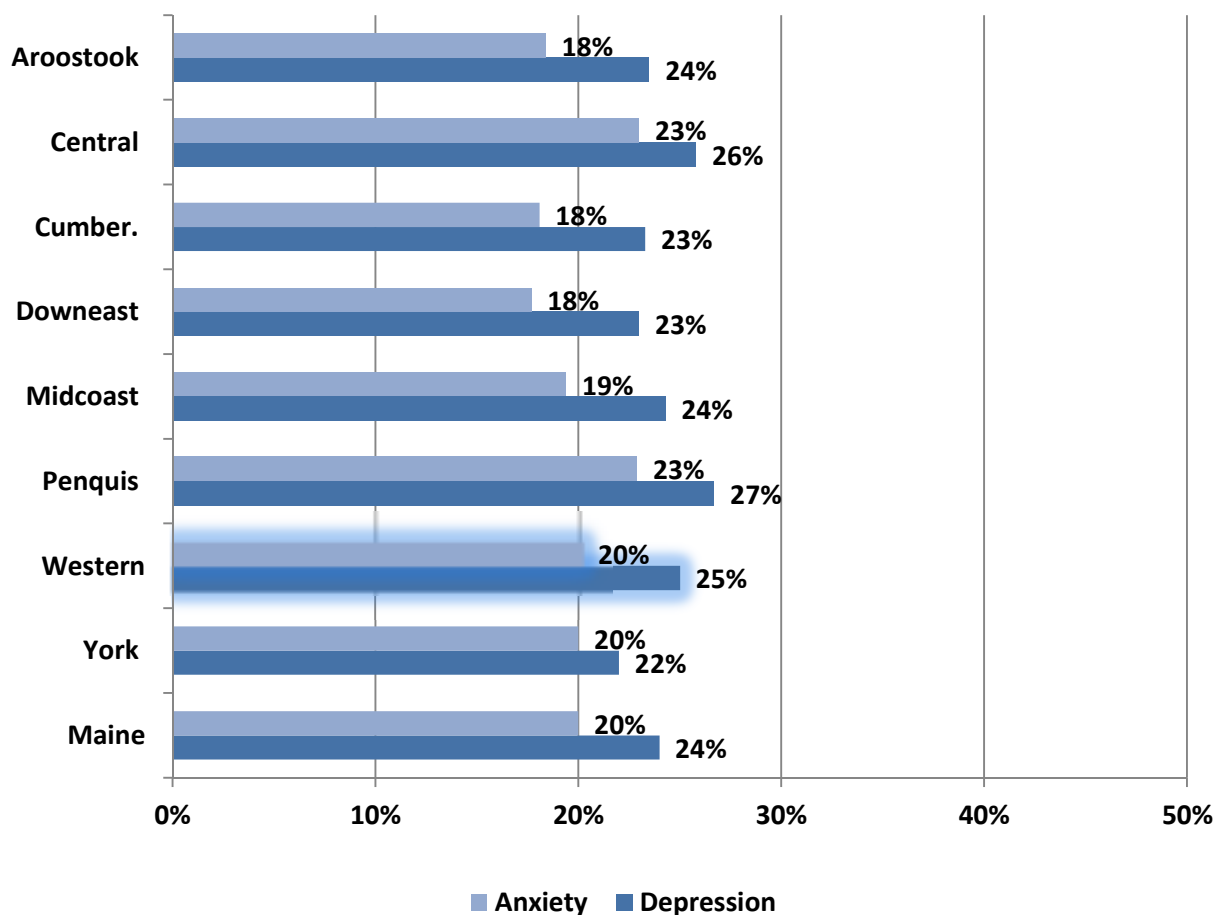
Source: BRFSS

Indicator Description: DEPRESSION AMONG YOUTH. This indicator measures the percentage of high school students reporting they felt sad or hopeless almost every day for two weeks in a row during the past year.

Why Indicator is Important: Experiencing depression in the past year is associated with higher rates of substance abuse. Among youth, depression is also associated with problems with relationships and academic achievement.

Data Source(s): MIYHS, 2011.

Summary: In 2011, 24 percent of high school students in Western PHD indicated that they felt sad or hopeless every day for two weeks or more in a row during the past year. This was slightly higher than the statewide average (23%).

Figure 44. Felt sad or hopeless almost every day for two weeks or more in a row during the past year, by Public Health District: 2011
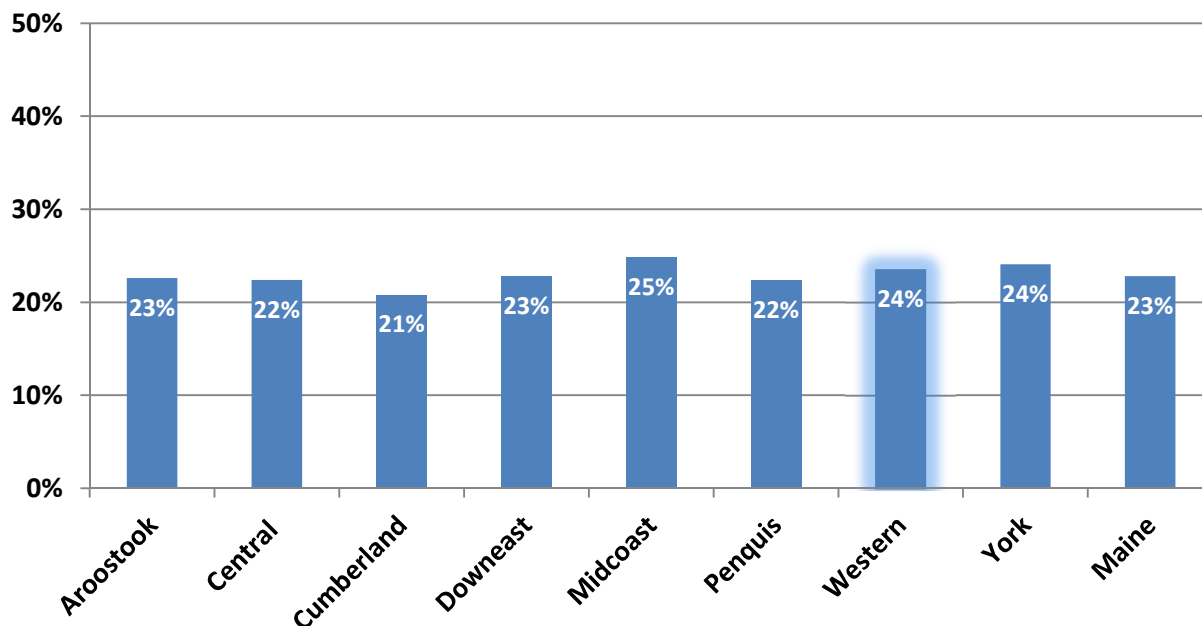
Source: MIYHS

Indicator Description: SUICIDAL IDEATION AMONG YOUTH. This measure examines the percentage of high school students who reported that they seriously considered attempting suicide during the past year.

Why Indicator is Important: Suicide is the most tragic consequence of major depressive disorders. Abuse of alcohol or other drugs may increase emotional problems leading to suicidal ideation and suicidal behavior.

Data Source(s): MIYHS, 2011.

Summary: In 2011, 14 percent of high school students in Western PHD reported considering suicide during the past year. This was slightly higher than the state average (13%).

Figure 45. Percent of high school students who considered suicide during the past year, by Public Health District: 2011
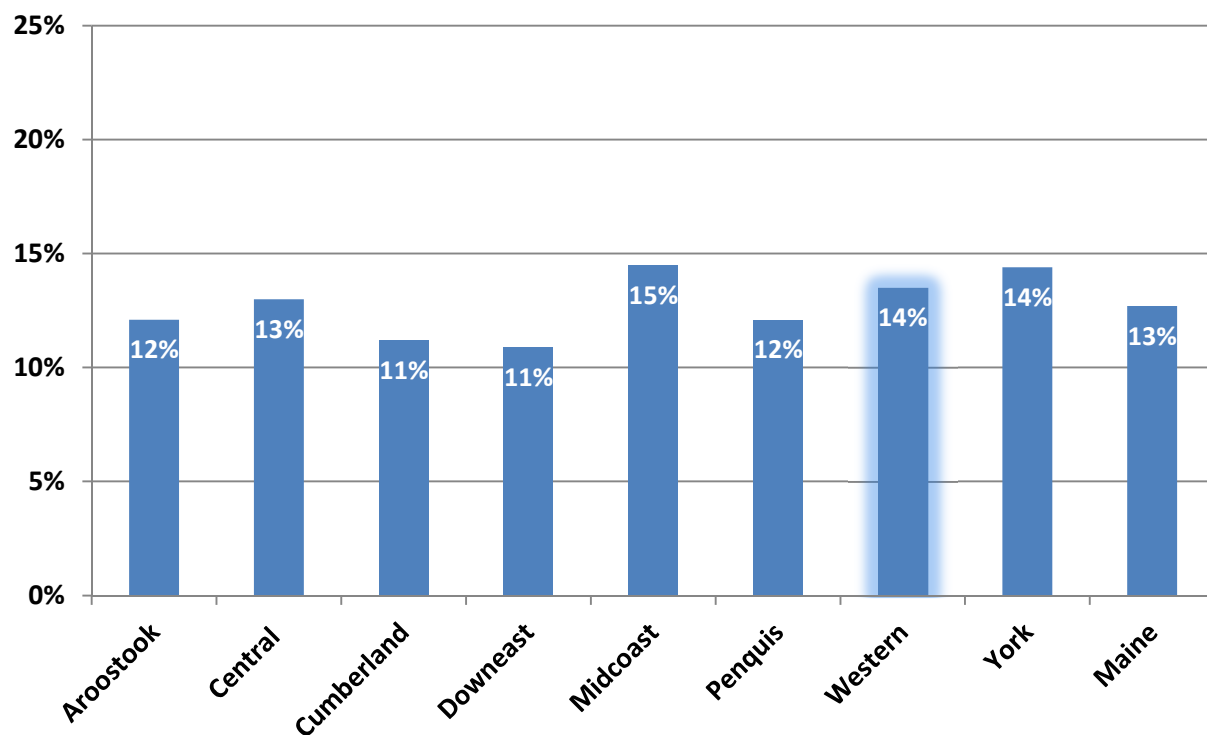
Source: MIYHS

Indicator Description: CO-OCCURRING MENTAL HEALTH AND SUBSTANCE ABUSE TREATMENT. This indicator reflects the proportion of treatment admissions for substance abuse where the individual also has a mental health diagnosis.

Why Indicator is Important: The link between mental health and substance abuse is well documented. In terms of treatment, it is important to know if one exists because the symptoms of each can affect the other.

Data Source(s): TDS, 2007-2012.

Summary: From 2007 through 2012 Western PHD has consistently reported lower percentages of individuals admitted for substance abuse treatment who also have a mental health diagnosis compared to the state average. Since 2007, Western PHD's rate of such treatment admissions has increased significantly, from 31 percent to 47 percent.

Figure 46. Percent of individuals admitted for substance abuse treatment that also had a mental health diagnosis in Western PHD: 2007-2012
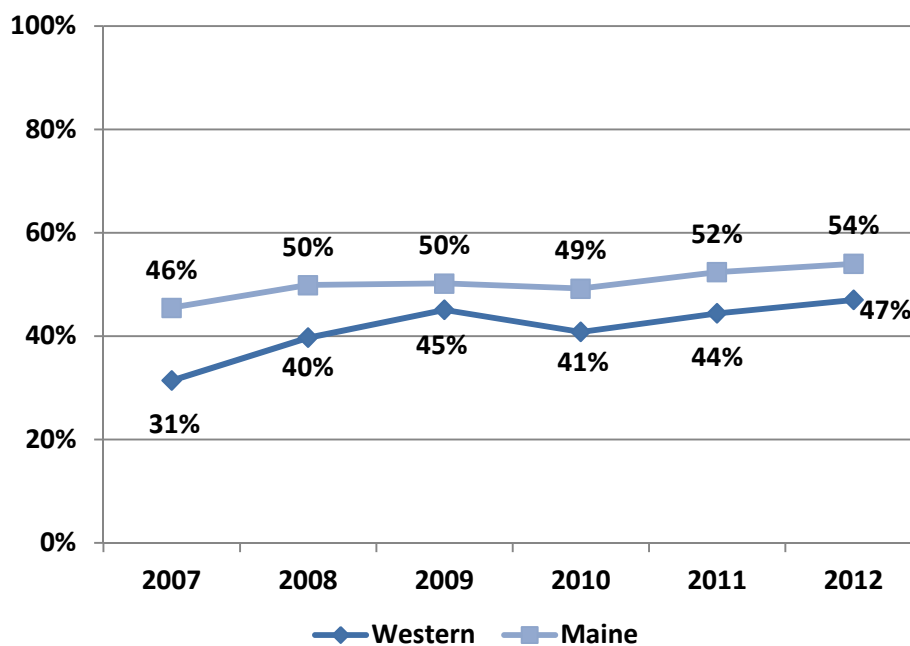
Source: TDS

Treatment Admissions for Substance Abuse

Substance abuse treatment admissions are an indicator of how many people *receive treatment* for a substance abuse problem. These admissions can be voluntary, but they can also be court-ordered. Treatment admission data should not be used as an indicator of the magnitude of the problems related to substance abuse. Rather, treatment should been seen a major consequence stemming from substance use and one that requires many resources.

The overall number of clients admitted to treatment has been declining since 2007, from 14,843 to 11,688 in 2012. Mainers continued to seek out treatment for abuse involving a wide array of substances besides alcohol; in 2012 there were 4,135 admissions for alcohol as the primary substance. This was followed by synthetic opioids (3,838) and marijuana (1,024).

In 2012, for the first time in Western PHD, the proportion of synthetic opioids surpassed alcohol as the primary reason for admission. Rates for primary admissions related to synthetic opioids and marijuana were higher than statewide rates in 2012. Among public health districts, Western PHD had the highest rate of cocaine/crack related primary admissions per 10,000 residents. In 2012, one-third of secondary treatment admissions were for marijuana. Synthetic opioids overtook alcohol in terms of secondary treatment admissions in Western PHD in 2011, and the rate appears to have remained stable since.

Indicator Description: PRIMARY TREATMENT ADMISSIONS. This measure reflects substance abuse treatment admissions. A "primary" substance is identified during the treatment admissions process based on use patterns (e.g., frequency, duration, quantity) and the risk(s) posed to the individual. The analysis excludes admissions for shelter/detoxification services.

Why Indicator is Important: The number of substance abuse treatment admissions is bound by both the need and the capacity for treatment. Treatment admission data are not a good indicator of substance use, abuse or dependence, but do provide an indication of service usage and the impact of substance use on the behavioral healthcare system.

Data Source(s): TDS, 2008-2012.

Summary: In 2012, 36 percent of all primary treatment admissions in Western PHD were related to synthetic opioids[6]. This represents a dramatic increase of 23 percentage points since 2008. In 2012, for the first time, the proportion of synthetic opioids surpassed alcohol as the primary reason for admission.

Figure 47. Primary drug admissions in Western PHD: 2008-2012

	2008	2009	2010	2011	2012
Alcohol	55%	53%	49%	40%	34%
Synthetic Opioids	13%	15%	18%	25%	36%
Marijuana	16%	16%	18%	17%	12%
Heroin/Morphine	5%	8%	8%	9%	9%
Cocaine/Crack	7%	5%	4%	5%	4%
Methadone	2%	2%	2%	3%	2%
Other Drugs	2%	1%	1%	2%	1%
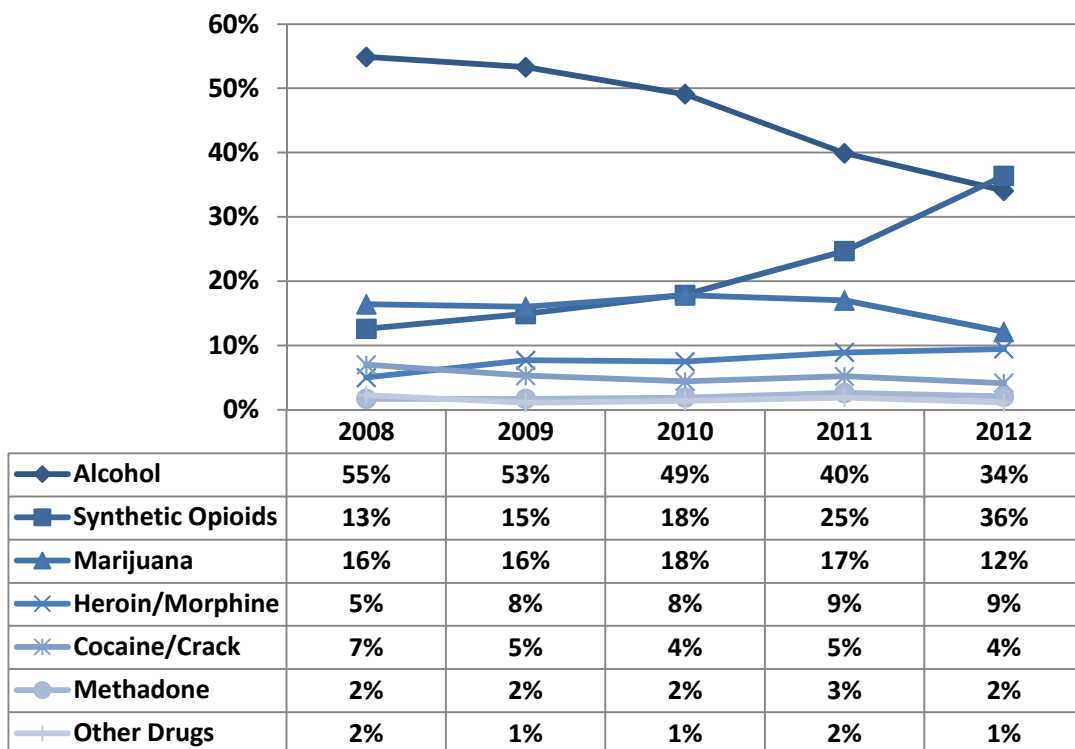
Source: TDS

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[6] "Synthetic opioids" excludes methadone and buprenorphine.

Summary: In 2012, the percentage of primary treatment admissions for alcohol in Western PHD was slightly lower than the statewide average. Conversely, the proportion of primary treatment admissions for synthetic opioids was three percentage points higher than the statewide average.

Figure 48. Primary drug admissions in Western PHD, by drug type: 2012
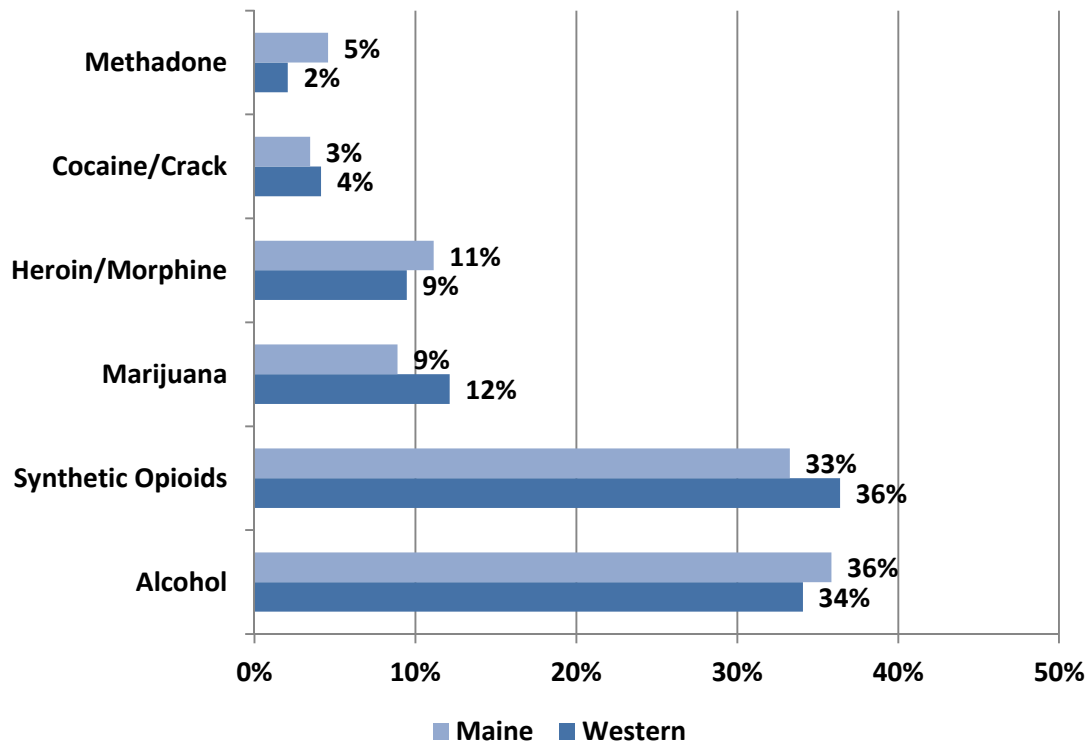
Source: TDS

Summary: In 2012, Western PHD had the third highest rate among public health districts of primary treatment admissions due to alcohol (37 admissions per 10,000 residents) and the second highest rate of primary admissions due to synthetic opioids (39.5 admissions per 10,000 residents).

Figure 49. Primary drug admissions per 10,000 residents, by Public Health District and drug type: 2012
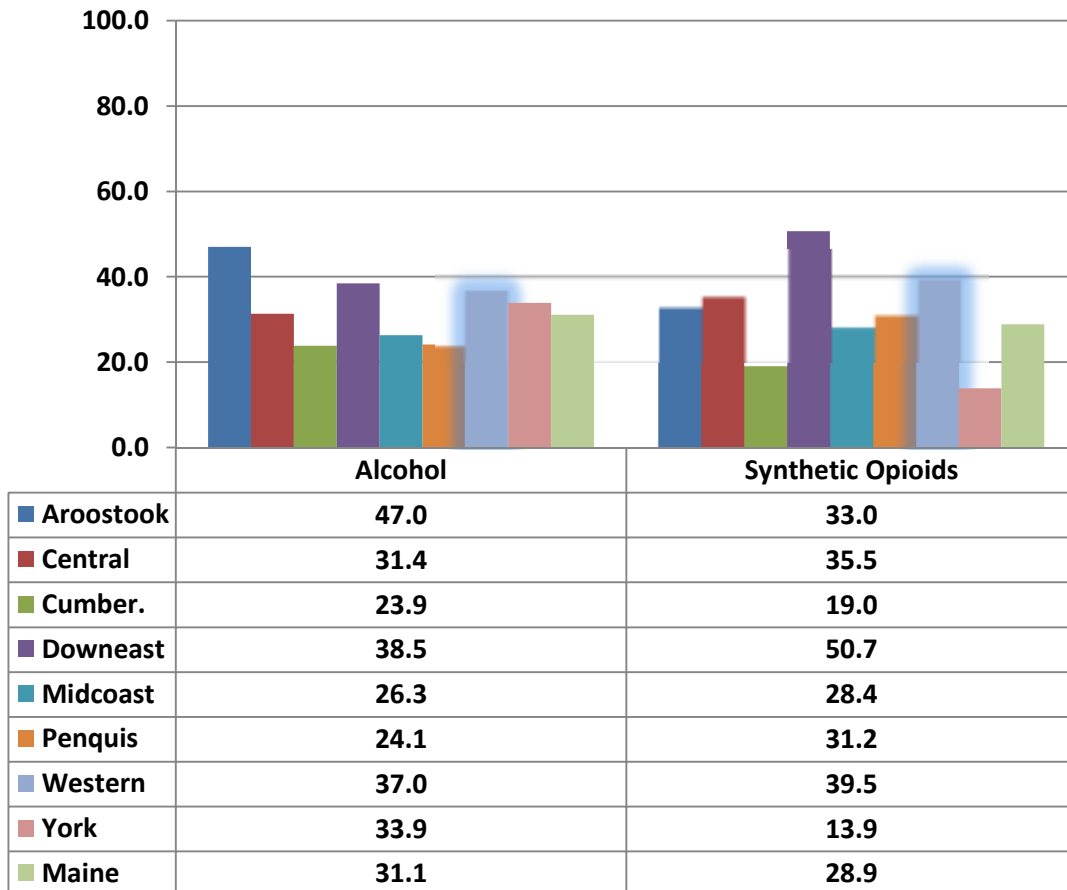
	Alcohol	Synthetic Opioids
■ Aroostook	47.0	33.0
■ Central	31.4	35.5
■ Cumber.	23.9	19.0
■ Downeast	38.5	50.7
■ Midcoast	26.3	28.4
■ Penquis	24.1	31.2
■ Western	37.0	39.5
■ York	33.9	13.9
■ Maine	31.1	28.9

Source: TDS

Summary: In 2012, Western PHD had the highest rate among public health districts of primary admissions due to cocaine/crack (4.5 admissions per 10,000), the second lowest rate of primary admissions due to marijuana (13.2 admissions per 10,000 residents), the fourth highest rate of primary admissions due to alcohol (3.8 admissions per 10,000 residents), and the second lowest rate of primary admissions due to methadone (3.7 admissions per 10,000 residents).

Figure 50. Primary drug admissions per 10,000 residents, by Public Health District and drug type: 2012

	Heroin/Morphine	Marijuana	Methadone	Cocaine/Crack
Aroostook	2.4	13.5	6.2	1.3
Central	10.6	6.8	5.0	3.7
Cumber.	13.3	5.5	3.8	3.7
Downeast	7.7	8.7	6.3	0.9
Midcoast	5.8	5.8	5.2	1.0
Penquis	7.2	3.4	4.3	2.1
Western	10.3	13.2	2.2	4.5
York	11.4	8.5	1.9	3.5
Maine	9.7	7.7	4.0	3.0
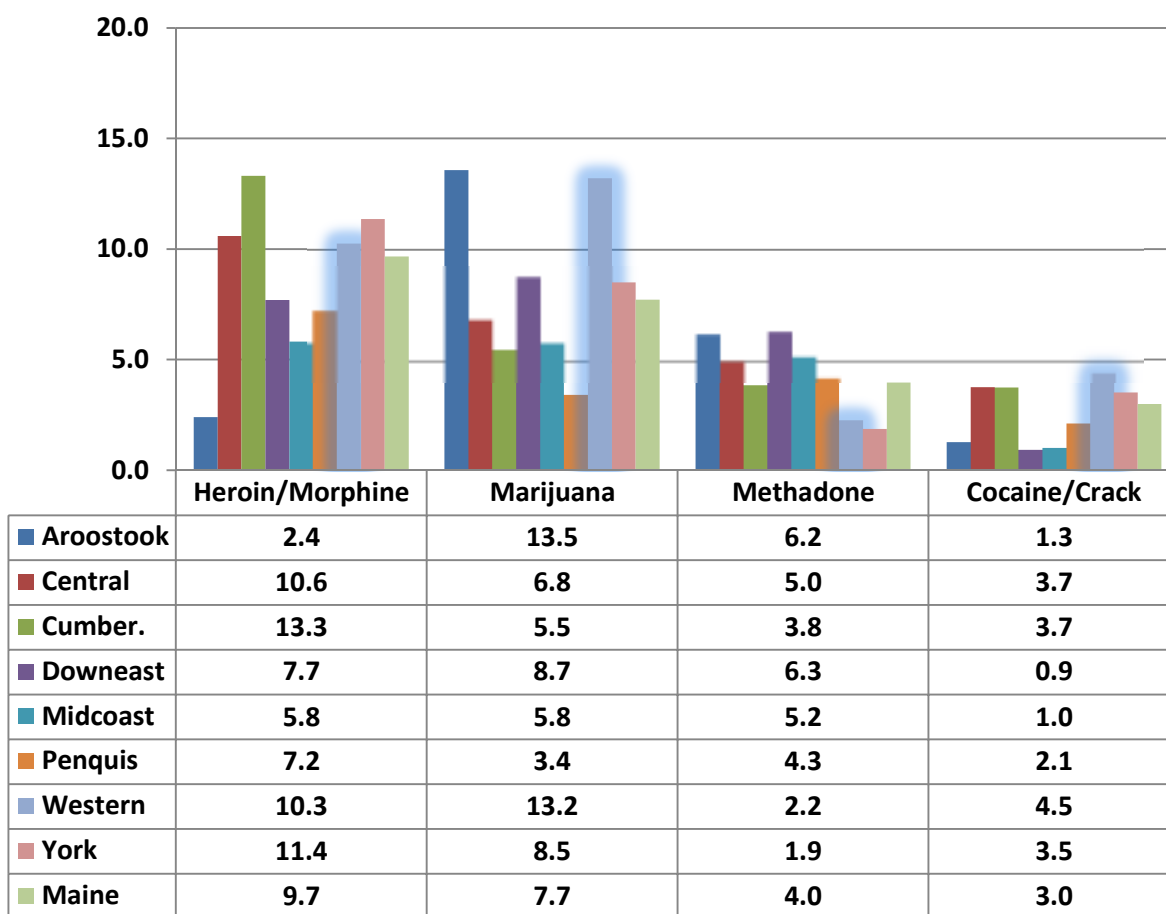
Source: TDS

Indicator Description: SECONDARY TREATMENT ADMISSIONS. This measure reflects substance abuse treatment admissions. A "secondary" substance is identified during the admissions process as one used by the individual and for which treatment may be received, but it is not the primary substance for which treatment was sought. The analysis excludes admissions for shelter/detoxification services.

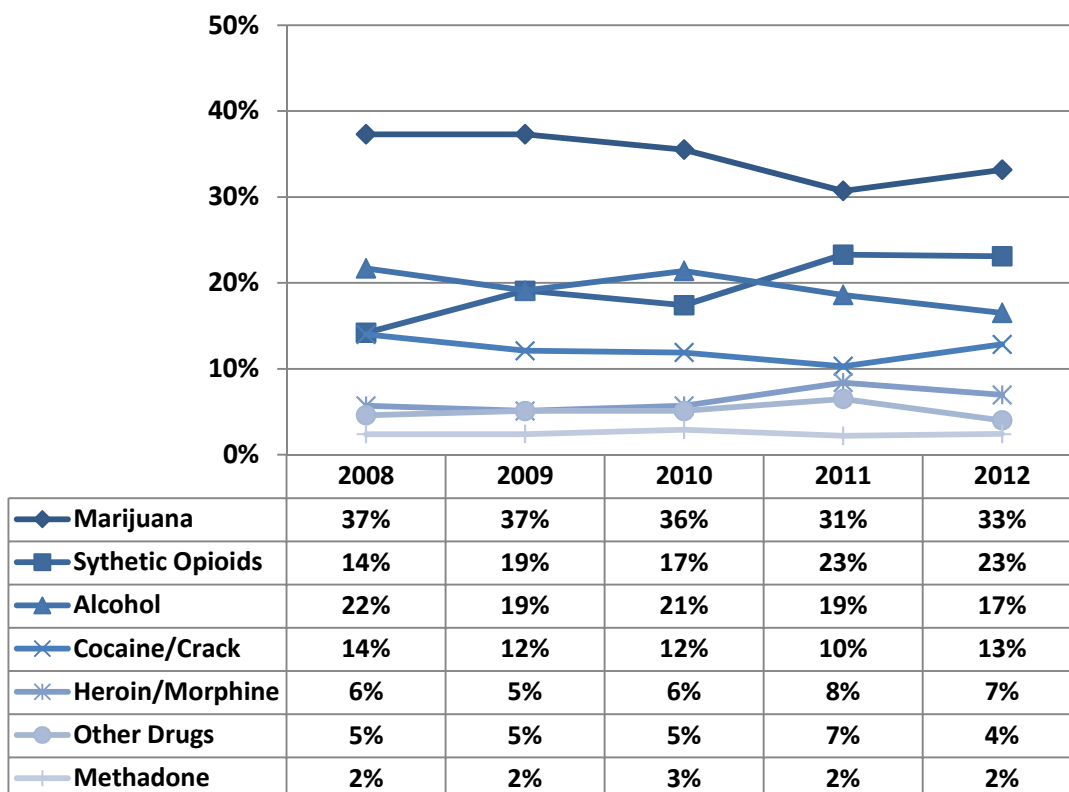**Why Indicator is Important:** The number of substance abuse treatment admissions is bound by both the need and the capacity for treatment. Treatment admission data are not a good indicator of substance use, abuse or dependence but provide an indication of service usage and the impact of substance use on the behavioral healthcare system.

Data Source(s): TDS, 2008-2012.

Summary: In 2012, 33 percent of secondary treatment admissions in Western PHD were for marijuana, followed by synthetic opioids (23%) and alcohol (17%). After surpassing alcohol in 2011, synthetic opioids have remained as a larger proportion of secondary admissions.

Figure 51. Secondary drug admissions in Western PHD, by drug type: 2008-2012

	2008	2009	2010	2011	2012
Marijuana	37%	37%	36%	31%	33%
Sythetic Opioids	14%	19%	17%	23%	23%
Alcohol	22%	19%	21%	19%	17%
Cocaine/Crack	14%	12%	12%	10%	13%
Heroin/Morphine	6%	5%	6%	8%	7%
Other Drugs	5%	5%	5%	7%	4%
Methadone	2%	2%	3%	2%	2%

Source: TDS

Summary: In 2012, Western PHD had higher proportions of secondary treatment admissions related to marijuana (31%), alcohol (19%), and cocaine/crack (13%) than the statewide average (30%, 14%, and 10% respectively). Conversely, it had a lower percent of secondary treatment admissions related to synthetic opioids (23%) than the statewide average (25%).

Figure 52. Secondary drug admissions in Western PHD, by drug type: 2012
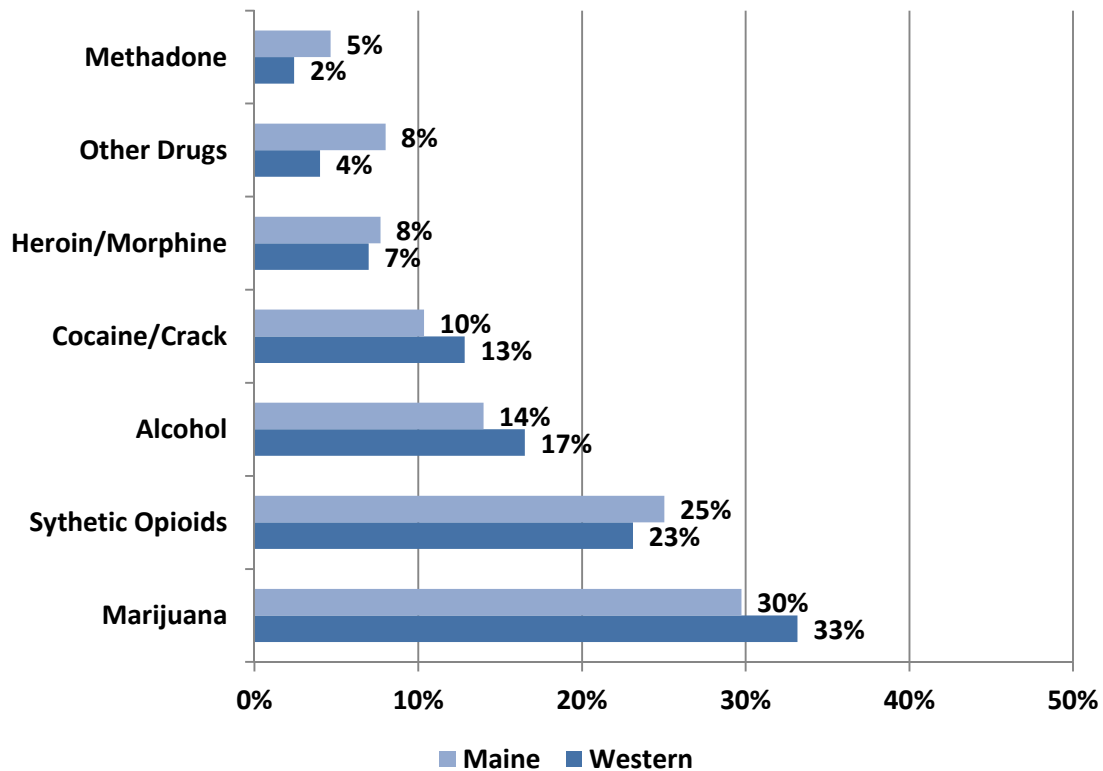
Source: TDS

Appendix: Data Sources

This report includes data that was gathered from a number of data sources. A detailed description of each source is provided below, consisting of information about the data included in each source, and retrieval or contact information. The report includes data that were available through May 2013.

There are multiple purposes for this report. One is to provide a snapshot of the most recent data regarding substance abuse, while another is to examine trends over time. Therefore, each indicator may have multiple sources of data that are included. While each indicator provides a unique and important perspective on drug use in Maine, none should individually be interpreted as providing a full picture of drug trends in Maine. In particular, the percentages and figures from one data source do not always align with the data and percentages from a similar source. Older data are often included in order to examine an indicator among a specific population or to find trends over time. When discussing rates of prevalence, however, the user should rely upon the most recent data source available.

Description of Data Sources

Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS is a national survey administered on an ongoing basis by the National Centers for Disease Control and Prevention (CDC) to adults in all 50 states and several districts and territories. The instrument collects data on adult risk behaviors, including alcohol abuse. BRFSS defines heavy drinking as adult men having more than two drinks per day and adult women having more than one drink per day, and binge drinking as males having five or more drinks on one occasion and females having four or more drinks on one occasion. The most recent data available are from 2011. **Due to methodological changes in weighting and sampling, 2011 BRFSS data cannot be trended with previous BRFSS years.** For this reason, we have only included snapshots of 2011 BRFSS data for this year's SEOW report. Both state and national data are available. Contact: Kim E. Haggan, Maine BRFSS Acting Coordinator; kim.e.haggan@maine.gov; (207) 287-5459.

Maine Department of Public Safety (DPS), Uniform Crime Reports (UCR). UCR data include drug and alcohol arrests. Drug arrests include sale and manufacturing as well as possession of illegal substances. Liquor arrests include all liquor law violations. OUI arrests are arrests for operating a motor vehicle under the influence of a controlled substance. DPS data are now available from 2011. Arrest data may reflect differences in resources or focus of law enforcement efforts, so may not be directly comparable from year to year.
Retrieval: http://www.maine.gov/dps/cim/crime_in_maine/cim.htm

Maine Department of Public Safety (DPS), Liquor Licensing and Compliance. DPS issues and renews licenses for the manufacture, importation, storage, transportation and sale of all liquor and administers those laws relating to licensing and the collection of taxes on malt liquor and wine. DPS maintains a list of all active licenses that can be accessed online.

Retrieval: http://www.maine.gov/dps/liqr/active_licenses.htm

Maine Department of Public Safety (DPS), Bureau of Highway Safety (BHS), Maine Department of Transportation (MDOT). The Bureau of Highway Safety is responsible for tracking all fatalities that occur on Maine's highways and reporting this information through the Fatal Analysis Reporting System (FARS). The data represented provides information on highway crashes and fatalities. Much of this information is gathered from our FARS system, which records data on fatal crashes in Maine for input into a larger national record-keeping system of statistical data. FARS data is also used by BHS and the Maine State Police to analyze enforcement priorities and schedules. Impaired driving is one of the most serious traffic risks facing the nation, killing thousands every year. Contact: Duane Brunell, Safety Performance Analysis Manager; duane.brunell@maine.gov; (207) 624-3278.

Maine Drug Enforcement Agency (MDEA). The MDEA, through its eight regional multi-jurisdictional task forces, is the lead state agency in confronting drug trafficking crime. This indicator differs from the Uniform Crime Report drug-related arrest data in that it only tracks MDEA efforts and does not encompass all activity within Maine law enforcement agencies. The data included in this report represents those arrested for a drug offense but does not indicate what other drug(s) may have been seized. For example, a person may be arrested for the sale of cocaine but also be in possession of oxycodone and marijuana. It is important to note that arrests and multi-jurisdictional drug enforcement are resource-dependent; such funds fluctuate from year to year, and must be reallocated to combat highest priority threats. Contact: Roy E. McKinney, Director; roy.e.mckinney@maine.gov; (207) 626-3852.

Maine Emergency Medical Services (EMS). Maine EMS is a bureau within the Maine Department of Public Safety (DPS) and is responsible for the coordination and integration of all state activities concerning Emergency Medical Services and the overall planning, evaluation, coordination, facilitation and regulation of EMS systems. EMS collects data statewide from the 272 licensed ambulance and non-transporting services. It is mandated that services submit an electronic patient care report to Maine EMS within one business day of patient contact. Data are compiled upon request. Contact: Jon Powers, Maine Emergency Medical Services; jon.powers@maine.gov; (207) 626-3860.

Maine Integrated Youth Health Survey (MIYHS). The MIYHS is a statewide survey administered biennially through a collaborative partnership by the Maine Office of Substance Abuse (OSA) the Maine Center for Disease Control and Prevention and the Maine department of Education to students in grades 5 through 12. The survey collects information on student substance use, risk factors related to substance use, as well as consequences, perceptions and social risk factors related to substances, and collects information on many other health factors. As of the date of this report, the most recent data available are from 2011. Due to changes in the survey administration and structure, the new survey data cannot be trended with the Maine Youth Drug and Alcohol Survey (MYDAUS). Contact: Stephen Corral, Substance Abuse Program Specialist, Office of Substance Abuse, stephen.corral@maine.gov; (207) 287-2964.

Maine Health Data Organization (MHDO). MHDO data includes all inpatient admissions to all hospitals in Maine for calendar years 2010 and 2011. Data categories created by the authors include alcohol, opioids, illegal drugs, and pharmaceuticals. All drug categories include intoxication, abuse, dependence, and poisoning cases related to the drug. The opiate category includes methadone, heroin, and opiates. The illegal drug category includes crack/cocaine, cannabis, and hallucinogens. The pharmaceuticals category includes all other non-opioid medications (including stimulants and depressants). Contact: Maine Health Data Organization (MHDO), lisa.parker@maine.gov; (207) 287-3225.

Maine Office of the Chief Medical Examiner. The Maine Office of the Chief Medical Examiner maintains records of all deaths associated with drug overdose. Drug categories include methadone, cocaine, benzodiazepines, oxycodone and heroin/morphine. The death data are compiled on an annual basis and must be finalized prior to release and so are not available to track changes that may occur over shorter time frames. Contact: Dr. Marcella Sorg, Director, Rural Drug & Alcohol Research Program, Margaret Chase Smith Policy Center, University of Maine; marcella_sorg@umit.maine.edu; (207) 581-2596.

National Survey on Substance Use and Health (NSDUH). The NSDUH is a national survey administered annually by the Substance Abuse and Mental Health Services Administration (SAMHSA) to youth grades 6 through 12 and adults ages 18 and up. The instrument collects information on substance use and health at the national, regional and state levels. The advantage of NSDUH is that it allows comparisons to be made across the lifespan (that is, ages 12 and up). However, NSDUH is not as current as other data sources; as of this report, data at the state level are available from 2009-2010. Older data are included for trending and comparative purposes. NSDUH defines Illicit Drugs as marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or any prescription-type psychotherapeutic used non-medically; Binge Alcohol Use as drinking five or more drinks on the same occasion (i.e., at the same time or within a couple of hours of each other) on at least one day in the past 30 days; Dependence or abuse based on definitions found in the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV); and Serious Mental Illness (SMI) as a diagnosable mental, behavioral, or emotional disorder that met the criteria found in the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) and resulted in functional impairment that substantially interfered with or limited one or more major life activities. Retrieval: https://nsduhweb.rti.org/

Northern New England Poison Center (NNEPC). The Northern New England Poison Center provides services to Maine, New Hampshire, and Vermont. A poisoning case represents a single individual's contact with a potentially toxic substance. Intentional poisoning includes those related to substance abuse, suicide and misuse. Data include the number of confirmed cases where exposures are judged to be substance abuse-related (i.e., an individual's attempt to get high). NNEPC collects detailed data on specific substances involved in poisonings, including the categories of stimulants/street drugs, alcohol, opioids, asthma/cold and cough,

benzodiazepines, antidepressants, and pharmaceuticals, as well as other substances. The category of stimulants/street drugs includes marijuana and other cannabis, amphetamine and amphetamine-like substances, cocaine (salt and crack), amphetamine/dextroamphetamine, caffeine tablets/capsules, ecstasy, methamphetamine, GHB, and other/unknown stimulants/street drugs. The category alcohol includes alcohol-containing products such as mouthwash. The opioid category includes Oxycodone, Hydrocodone, buprenorphine, methadone, tramadol, morphine, propoxyphene, codeine, hydromorphone, stomach opioids, Meperidine (Demerol), heroin, Fentanyl, and other/unknown opioids. The asthma/cold and cough category includes eye, ear, nose, and throat medications. Data available from the poison center are reported on a continual daily basis and are included through December 2012. These data are only reflective of cases in which the Poison Center was contacted. Contact: Karen Simone, Director, Northern New England Poison Center; simonk@mmc.org; (207) 662-7221.

Prescription Monitoring Program (PMP). PMP maintains a database of all transactions for class C-II through C-IV drugs dispensed in the state of Maine. Drug categories used in this report include narcotics, tranquilizers, stimulants, and other prescriptions. Other prescriptions include those drugs that are not classified as narcotics, tranquillizers or stimulants, including products such as endocrine and metabolic drugs, analgesics and anesthetics, gastrointestinal agents, and nutritional products. The counts included in this report represent the quantity dispensed through prescriptions filled between 2006 and 2012. Contact: John Lipovsky, PMP Coordinator, Substance Abuse and Mental Health Services; john.lipovsky@maine.gov; (207) 287-3363.

Treatment Data System (TDS). TDS is a statewide database that includes information about clients admitted to treatment in OSA-funded facilities through December 2012. Analyses in this report are based on clients' reported primary, secondary and tertiary drug(s) of choice as well as other demographic and background information that is collected at intake. Drug categories included in this report are alcohol, marijuana, cocaine, heroin, synthetic opiates, methadone/buprenorphine and benzodiazepines. Contact: Stacey Chandler, Substance Abuse and Mental Health Services; stacey.chandler@maine.gov; (207) 287-6337.

U.S. Census Bureau. The U.S. Census provides summary profiles showing frequently requested data items from various Census Bureau programs. Profiles are available for all states and counties, and for cities and towns with more than 25,000 people. Data are updated no less than annually. Retrieval for Maine census data: http://quickfacts.census.gov/qfd/states/23000.html